Singapore FinTech Festival Conference 2018
Day 1 key highlights

12 November 2018
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This document is developed by the Monetary Authority of Singapore (“MAS”) in collaboration with Deloitte Southeast Asia Ltd (“Deloitte”).

It directly reports on and summarises the topics presented and discussed at the FinTech Conference as part of the Singapore FinTech Festival 2018. The contents within this document by no means reflect views and opinions from Deloitte or the MAS. Please contact Deloitte, the MAS or other appropriate organisations and agencies should you wish to obtain expert opinions on what has been reported in this document.

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Festival Stage

Tech Talk: AI for Good by Saqib Shaikh, Software Engineer, Microsoft
10.00am

Key points

Saqib Shaikh began the session with the concept of equalising society through technology.

Shortly after receiving his first computer at the age of seven, Shaikh lost his sight. At a primary school for the blind, a teacher identified Shaikh’s potential and encouraged him to learn how to type. Moving into a boarding school provided him with the fundamental skills he needed to function in the world.

Shaikh highlighted how technology had been important in enabling the visually impaired community to operate in the world, from creating braille textbooks, to raised charts and spoken word books. Of particular relevance to him were solutions, which could read out inputs during the coding process.

Shaikh studied computer science at university, graduating at the top of his class. During his studies, he realised he had to change his environment to function better, this included speaking with lecturers and hiring people to read text books aloud to him.

While pursuing his Masters in Artificial Intelligence (AI), Shaikh was inspired by a friend who suggested that rather than speaking about changing the environment, he could make a real change. This led him to realise that disabilities were drivers of innovation.

In the last 13 years at Microsoft, Shaikh spent most of his time working on mainstream products, including Cortana. However, a few years ago, he decided to act on his passion of using AI to improve the disabled world. The idea of Seeing AI was then ignited at a Microsoft internal hackathon. Seeing AI is an app that can verbally describe images and currencies, read out documents and signs, and recognise friends. A video was shown to the audience describing the capabilities of the app.

Shaikh expressed his excitement at the possibility of a future where wearables would bring together the best of humans and technology, to make a better world, for example real time language translation.

He showed a video demonstrating the projects his team was working on, including:

1. Soundscape
2. Eye control for ALS
3. Swiftkeys symbols
4. Learning tools for reading
5. Helpicto (converts words to pictures)
6. Seeing AI

In his closing, he reiterated his excitement about the possibility of AI making a significant change to the lives of people with disabilities.
Photo

Although the world is full of suffering, it is also full of the overcoming of it.
Herzen Koller

Technology is a Great Equalizer
Tech Talk: Innovation, Inclusion, Innovation by Ravi Menon, Managing Director, MAS
10.20am

Key points

Ravi Menon thanked Saqib Shaikh (the preceding speaker) for sharing his story and demonstrating how technology can help find innovative solutions for life problems. Guided by empathy, we can create a more inclusive society with innovative technologies.

Shaikh’s story exemplifies the core objective of Singapore Fintech Festival - innovation, inclusion, and inspiration.

Menon then welcomed over 40,000 participants from over 100 countries to the third edition of the Singapore FinTech Festival (SFF), which has become the biggest annual gathering of the global FinTech Community.

When the FinTech journey first started in 2015, a Smart Financial Centre was imagined where innovation and technology are pervasive. MAS hopes to create a world where financial services are built around our life and around our needs – where identity is human, payments are invisible, insurance is intuitive and financial advice is integrated. With this, our financial sector would be one that is customised for our needs, invisible to our eyes, and an absolute delight.

Singapore’s local banks understand this – UOB Bank’s Right by You!, OCBC Bank’s Simply Spot On!, and DBS Bank’s Live More, Bank Less!

Innovation and technology are key to realizing this future, but they are not enough. There needs to be a FinTech ecosystem to make this happen.

There are six components of FinTech ecosystem that MAS is working on:

1) People

Singapore is taking a multi-pronged approach to address the shortage of technology skills. Institutions of higher learning are adapting their curriculum with industry input to develop students who are able to work with emerging technologies. Financial institutions are putting in place programmes to help re-skill mid-career professionals to take on the jobs of future. Singapore will continue to welcome and embrace top talents from across the world to augment its own talent pool and raise the game.

2) Identity

A pain point of verifying identity is Know Your Customer (KYC). For personal KYC, the Singapore government has taken the first step with National Digital Identity (NDI) and within it, a powerful component MyInfo - a digital service that enables citizens to authorize third-parties to access their personal data sitting across many different government agencies.

With these initiatives, the personal KYC problem has been substantially solved, but corporate KYC is far more complex.

Many financial institutions have been working towards a solution, but have been unable to make it worthwhile due to cost. MAS will continue to explore ways to alleviate KYC pain for financial institutions and their customers. MAS is now partnering GovTech to work with the industry to facilitate credit assessment of SMEs using trusted government data.

3) Payments
Singapore has substantially completed its national e-payment infrastructure, which includes:

- FAST, a 24x7 real-time funds transfer infrastructure.
- PayNow allows instant money transfer using an email ID or mobile number.
- UPOS, a unified point of sale based on world wide open standards
- SGQR, the first of its kind in the world using a standardised QR code in Singapore

The pain point that remains – for banks, businesses, and individuals – is the cross-border payments and settlement of assets. Cross-border payments involve multiple currencies and cross-border settlements involve multiple assets, and there is no single trusted central party to do this; distributed ledger technology holds promise in this area.

In 2016, Project Ubin demonstrated that banks could pay one another without going through MAS, using a blockchain based digital representation of the Singapore Dollar. Last year, Project Ubin successfully achieved decentralized netting of payments while preserving transactional privacy. This year, there are two more advances. First, the Project Ubin team has successfully harnessed blockchain technology for the settlement of tokenized assets, and secondly, MAS is working with like-minded central banks to explore faster, cheaper and more efficient cross-border payments.

4) Data Governance

MAS has been actively working with the industry to develop principles to guide the responsible use of data in financial services, and has released a set of principles to promote Fairness, Ethics, Accountability & Transparency, or FEAT, in the use of Artificial Intelligence and data analytics.

On the international front, there needs to be more data connectivity and less data localisation. This is a key challenge for the technology community to solve together with policy makers – how to enhance data connectivity while taking into account the issues of data sovereignty.

Common data standards across countries are needed so that data can flow freely in an environment of trust and security. This means that in the digital economy of the future, data connectivity agreements among countries will become as important as today’s free trade agreements.

5) Applied research

Last year, MAS launched a S$27 million grant scheme to support R&D in AI and data analytics for the financial sector. More than 30 applications were received. Also in 2017, MAS collaborated with MIT Media Lab in FinTech R&D. This year, the Intellectual Property Office of Singapore established a FinTech Fast Track initiatives for patents.

6) Platforms for innovation

Innovation does not occur in isolation - people and ideas need to be connected, and similarly, problems need to be connected to solutions.

One such innovative initiative is AFIN – the ASEAN Financial Innovation Network. AFIN brings banks and FinTech firms together to develop solutions to improve financial inclusion in the region.

AFIN will launch the API Exchange, or APIX at this year’s SFF. APIX is the world’s first cross border open architecture platform to enhance financial inclusion.

MAS and the InfoComm Media Development Authority (IMDA) are also working together to create a cross-border innovation platform for SMEs called Business sans Borders.

In closing, Menon emphasised that FinTech is not just about technology, nor is it just about finance. FinTech is about the spirit of enterprise infused with empathy that lifts us to be better people. It is about innovation, inclusion and inspiration.
The full speech by Ravi Menon is available on the [MAS website](http://mas.gov.sg).

**Photos**
FinTech Awards – ASEAN Open Winners and ASEAN SME Winners
10.50am and 11.30am

Key points

The FinTech Awards celebrate the achievements of companies in the FinTech space. In past years, the awards focused on Singapore firms. This year, the awards have expanded to include countries in the ASEAN region.

The new award categories are:
- Singapore founder
- ASEAN SME
- ASEAN Open
- Global

The nine winners of the ASEAN PitchFest were also included, together with 40 finalists, in the FinTech Awards selection. As part of the selection process, MAS sought input from industry experts through a selection criteria comprising of four themes:
  - Impact
  - Practicality
  - Inter-operability
  - Uniqueness and creativity

At the first day of the Singapore FinTech Festival on 12 November, the winners of the ASEAN Open Category and ASEAN SME Category were announced.

The ASEAN Open Award recognizes ASEAN-based companies of any size that has done well in implementing innovative FinTech solutions.

The winners of the MAS FinTech (ASEAN Open Category) Award are:
- First prize (SG$150,000): LenddoEFL
- Second prize (SG$100,000): SQREEM Technologies PTE Ltd
- Third prize (SG$50,000): Finantix Asia Pacific Pte Ltd

This award was presented by Ravi Menon, Managing Director, MAS.

The ASEAN SME Award recognises top SME companies that have performed exceptionally in the FinTech space.

The winners of the MAS FinTech (ASEAN SME Category) Award are:
- First prize (SG$150,000): FinAccel Teknologi Indonesia
- Second prize (SG$100,000): Katipult
- Third prize (SG$50,000): MoneyMatch

The award was presented by Calvin Choi, Chairman AMTD Group.
Photos

[Images of people receiving awards and speaking at a conference, with speakers and attendees at the Singapore FinTech Festival Conference 2018.]

Singapore FinTech Festival Conference 2018 | Day 1 key highlights
Banking on New Models in the FinTech Age
11.00am

 Speakers
- Bill Winters, Group Chief Executive Officer, Standard Chartered Bank
- Subra Suresh, President, Nanyang Technological University
- Calvin Choi, Chairman & President, AMTD
- Carlos Torres Vila, Chief Executive Officer, BBVA

 Moderator: Haslinda Amin, Chief International Correspondent for Southeast Asia, Bloomberg Television

 Key discussion points

Haslinda Amin opened the panel discussion with an introduction to the state of innovation and growth in the financial sector. She said that new technology is causing a looming power shift in the banking world and great disruption. In Europe, according to Accenture, 30% of new revenue is coming from non-banks and big banks are rethinking its strategies. She asked who will win the war - would it be big tech or big banks and where will be the biggest overhaul.

Subra Suresh highlighted that FinTech can be empowered through technologies such as artificial intelligence (AI) and machine learning. He highlighted there is an opportunity to do new things through pattern recognition, inference and automation. As a result, these will lead to new product offerings which have more accurate predictions, availability, and streamlined processes. Technologies such as blockchain provide benefits such as being decentralised, tamper resistant and privacy preserving but there are also downsides. To succeed, a key consideration is how technology interfaces with human behaviour.

Amin asked Carlos Torres Vila how BBVA, one of the most progressive banks, have done this.

Torres Vila emphasised that their key focus is to make money a "facilitator" so that people can achieve life goals and business goals, and that AI and machine learning are a big part of how these value propositions can be developed. At BBVA, their purpose is to bring the age of opportunity to everyone. The vision is around the true automated personalised financial advisory services for everyone.

Amin asked Bill Winters how far along the digital transformation of banks is, as, according to studies, only 7% of banking processes have gone digital.

Winters replied that this transformation is still in its early stages, and even 7% seems too high of a statistic. Most companies are using technology to redo existing business and not anything new. In the future, financial services will bear no resemblance to today and people are central to driving this change. People do not know what services they will have in five to 10 years’ time and are not actively seeking for them. The opportunity for banks and non-banks is to identify these unmet needs and get in front of them.

Calvin Choi noted that the customer base for non-banks have changed. They are looking for solutions that are direct, relevant, easy to use and transparent. Both Hong Kong and China are driving digital payments globally. Cashless forces in China are so prevalent that some places no longer accept cash and everything is going digital. This is driving changes in customer experience and how customers are being served across the region.

Amin asked if banks have been nimble enough to incorporate these technologies.
Suresh replied that there have been very different models with forward lookers or early adapters and laggars. This often depends on societal conditions such as where India has substantially increased the number of people in the banking system through government policies. From an academic standpoint, they are trying do something at the Nanyang Technological University (NTU) in Singapore to help society more broadly by making it mandatory for all undergraduates to take basic digital literacy courses starting from this year. When adopting new technologies, we should be cautious and mindful of issues such as cascading effects, cyber security, added bias, complexity and inter-operability. These should not stop the application of new technologies but should nevertheless be considered when applying them.

Amin asked if there is a sense that big banks are constantly playing catch up, for example, Alipay has managed to produce a platform to allow customers to move money in and out of their accounts at any time while still providing 5% annual returns for investors. Are banks constantly playing catchup to FinTechs?

Winters replied that this is a very competitive marketplace and people are taking initiatives all the time. There is a lot of innovation in financial services coming from banks or insurance companies, not just from the outside. The question is how quickly can other people adapt to a change in the competitive environment. Banks have not been as nimble as they should have been, this is often in areas where regulations have made it more difficult for banks but not always. That said, banks have been very fast followers in some cases or leaders in others. Innovations in trade finance, such as wholesale cross border payments, have been coming out of the banking industry. FinTech has supported those efforts as they have been partners in that regard. Banks are not out of the race, structurally deficient or uncompetitive. It is incumbent on the industry to be nimbler and more responsive to change in customer requirements.

Vila added that in some respects, this is the innovators’ dilemma, and it is hard to ask the incumbents who are successful to drive change even though this is what they should be doing. By and large, the established financial services industry around the world has been very slow to adopt innovation and to change at the pace required. At BVBA, one of the big things they are trying to do for the last few years is to drive a cultural transformation of the bank. A big part of that is reinforcing three simple ideas that they strive to live every day: the customer coming first, thinking big and that they are one team.

Amin asked, with one of the biggest benefits of AI and ML being big data, which has been the domain of FinTech startups and TechFins like Alibaba, how did the speakers view the explosion of data and how it is being mined.

Suresh responded that one of the ever present concerns with data is veracity, especially in a globalised world where it is coming from many different sources. Banks have a better opportunity within their global portfolio to manage, curate and validate the data than other entities. In a cross border world, this will be one of the important considerations to make sure that the data is managed and mined correctly. It is a tremendous opportunity and at the university level, they are trying and producing the next generation of citizens, be them working at the bank or elsewhere, they must be equipped to handle massive amounts of data.

Choi added that data today is very multi-dimensional, for example, biometric, location and Know Your Customer (KYC). It is not about how much data you possess, it is about how well you can interpret it and get the most out of it. Ultimately, aggregators can collect data from banks and non-banks, not just client centric information but also market, risk or other types of data. They are currently working with different regional banks in China listed in Hong Kong in a strategic cooperation alliance across banks where they are aggregating their understanding of the market and rationalising the data. This collaboration between banks, non-banks and academia is the future.

Winters stated that only a small proportion of the data that everyone uses is truly proprietary. All institutions have proprietary data which is useful but the successful companies are using big data and aggregate data across proprietary and nonproprietary sources. It is about how these data flows are assembled and analysed and not about the quantity of proprietary data. The industry is still lagging in
this regard as it is still focusing on proprietary data rather than the vast amounts of data that are available outside of their infrastructure.

Vila stated that data is the cornerstone for bringing the age of opportunity to everyone as it is through data that predictions can be made, and problems can be anticipated and can have an impact on managing financial lives for people and for businesses. There is a shift happening in what owning data means, it is not just proprietary and nonproprietary data but what you have access to. Access will be the game and this is based on consent and trust.

Amin asked if the banking ecosystem will be challenged by the FinTechs that sit on a massive amount of data.

Vila responded that they sit on a massive amount of data but this is accessible through consent by third parties. Similarly, banks sit on high quality data that used to be proprietary but will no longer be going forward. In that transition, banks have something to gain because of the element of trust which is the gateway to consent and access.

Amin asked for the speakers’ take on the regulator’s view on data usage.

Suresh responded that data is not just proprietary bank data but also data such as voice recognition, face recognition and biometric data which comes from multiple sources. There is no border to data and in some cases no national border. Given the amalgamation of all of these, there are two things that come to mind. Firstly, make sure that the industry has the trust of the society in their ability to protect the data and minimise any biases created. Secondly, there is a need to ensure that data does not create other types of biases where certain people are preferred versus those who are not with equal qualifications.

Amin also asked about regulation on data usage in in Asia versus Europe.

Winters responded that Europe is leading with open banking which requires banks to share data. This will lead to both an opportunity for better service as well as the risk of being scammed. Clients have to consent to the transfer of data but can do this unwittingly which could lead to data misuse. This will lead to a realisation that sharing data does not just lead to convenience but can also have a downside. The banking industry has always been a repository of trust and should leverage this to extend beyond wealth management. Regulators are alive to these risks but for the time being, they are focused on creating opportunities for customer choice will eventually find a more balanced way to help protect customers and their data but not there yet. Asia is still a generation behind in this regard.

Vila added that there are some legal and cultural differences that could help explain this difference. In Europe, the focus has been on protecting the individual, e.g. the EU General Data Protection Regulation came into force this year which reinforced rights of individual on their data and provides a framework to manage it. There are different points of view on what the future will bring. One view is that you should own your data and control it, giving up your privacy should never be the price for a service. But in different parts of the world, the expectations are different. With the advent of the internet of things and a more connected world, this could be an opportunity for banks to manage the consent for third parties to access data and is natural extension of the position of trust.

Choi stated that data considerations need to be embedded into the DNA and the current people need to be upskilled so as to understand how data can be used. As such, they are working with a university in Hong Kong to set up the first FinTech school there.

Amin ended with asking who will be the lenders in the new age, will it be big banks or big tech?

Suresh’s view was that it would be a combination, big players will have an advantage but small players can also use technology such as blockchain to provide social benefits. Banks will change dramatically but will still exist and have an important influence on society.
Winters’ view was that lenders will be the savers, everyone else will be intermediaries. There will be a role for intermediaries to manage and aggregate the data and underlying risk. Big tech will be valuable competitors but will not displace banks.

Choi’s view was that this will be combined and that neither will dominate. Those with the most data and the ability to analyse it will continue to be big tech but the fine line between them will get more and more blurred.

Vila’s view was that customers’ finances will be more self-driven with things becoming automated across wider ecosystems. Boundaries across industries will continue to blur to such an extent that the question will lose any meaning in the future as the landscape will be so fluid. The banks will have an opportunity to take an innovative position and leverage the trust they already have.

Photos
Above: Prof Subra Suresh, President, Nanyang Technological University

Above: Bill Winters, Group Chief Executive Officer, Standard Chartered Bank
Above: Calvin Choi, Chairman & President, AMTD

Above: Carlos Torres Vila, Chief Executive Officer, BBVA
Collaboration between Banks & Fintech: Fad or Real?
11.40am

Key discussion points
Tan Hooi Ling started by sharing her personal experience of the inconvenience of spending years travelling around in taxis, and why she chose to join a start-up. Smart phones, connected networks combined with technology and operational innovations, have brought about an opportunity, to solve the inconvenience she faced, and for other similar problems.

Grab, through its FinTech platform Grab Financial, is focusing on the financial inclusion of Southeast Asia’s unbanked or underbanked population.

Janet Young described her FinTech journey at UOB to be tough but very fulfilling – tough due to different views and competing demands. However, Young shared that it is important to remain focused on the customers and their needs, and identifying customer sectors that are unbanked or underserved in order to help the bank grow its customer base.

She further shared that UOB has a team that leads the bank’s strategy formulation through an ASEAN lens. Such strategies enable initiatives to improve customers’ lives, including educating the silver generation, ensuring easy ATMs access for visually impaired, and helping SMEs transform and adopt digital solutions.

The speakers also shared their views on the challenges faced by Banks and FinTechs when collaborating with each other:

**Challenge #1: Cultural difference - FinTech companies are too different for successful collaboration**

Tan identified two important areas - first, having shared objectives by the top level, including not only being present, but also doing what truly matters; and second, how the partners intend to work and learn together. Tan stated that while it is impossible to find a business partner with the same culture, it is how the parties intend to bridge the differences together that matters.

**Challenge #2: System architecture - Can a legacy platform and an agile platform fundamentally work together?**

Young shared that as a bank operating across 19 countries with 500 offices serving millions of customers, it is important to have a robust, safe and resilient system that can process and store information safely, securely and make it available constantly. However, besides having a core banking system that is consistent and efficient, it is also important for the bank to be relevant and stay ahead in order to compete in the digital revolution. UOB was not born digital unlike Grab. As such, UOB has to become digital. To do so, the bank has invested up to SG$1.2 billion over the past few years to build its digital capabilities and data architecture. With data and analytical tools, the bank will have the power to personalise services and manage risks.

Tan added that there are many ways to build a system, but ultimately, it is how they are prioritised that affects the collaboration. She expressed her faith in the security and scalability of a system.
allows Grab access to the latest hardware, software and systems that were not available when UOB first started out. What then is important for Grab is to learn from UOB’s expertise and its customer knowledge.

Challenge #3: Collaboration Model - Can FinTechs and banks be partner on an equal footing?

Tan stated that Grab not only has partner access, but also the heart, will and desire for future partnerships. This has contributed to the firm’s 60+ partnerships to date. She shared that the firm strongly believes that together, there is more to serve.

Young shared that UOB’s partnership model defines successful collaboration of financial services industry and FinTech. She acknowledged, in Southeast Asia conditions and environment are conducive for banks, FinTech and ecosystem partners to collectively create and give value to the community.

UOB and Grab also took the opportunity to announce their strategic alliance across ASEAN to bring digital services to a growing base of digital consumers by extending the bank’s suite of services to the highly mobile-first Grab users through the digital Grab app.

Photos
Above: Tan Hooi Ling, Co-Founder, Grab

Above: Janet Young, Managing Director & Head, Group Channels & Digitalisation, UOB Group
Prudential Stage: ASEAN Opportunities

ASEAN: Region of Opportunities and The Big ASEAN Picture
1.00pm

ASEAN: Region of Opportunities by Dr. Amlan Roy, Senior Managing Director, SSGA London

Key points

Amlan Roy began by introducing to the audience the word “demographics”. He highlighted the word by using a quote from the biggest management consultant of the 21st century, Peter Drucker, who said “Demographics is the single most important factor that we do not pay attention to but when we do, we miss the point.” Roy then noted that demographics is not about age, nor the number of people. Instead, it relates to the characteristics of people, consumers and workers. There are 7.7 billion consumers and 5.3 billion workers in the world, and they are very diverse in the things they consume. Consumption accounts for 62% of GDP. Each individual consumer is very different, yet we are taught in universities, for instance, to regard every Singaporean as the same.

Roy then mentioned the main topics will cover - why demographics is important, role of ASEAN in a global economy, opportunities and challenges, and where does technology fit into the lives of the 7.7 billion population.

Regardless of what one invests in, we need to understand the underlying demographics. In this case, he focused on ASEAN 6 – Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam. The share of global GDP has gone up from 3.3 % in 1980 to 5.9% in 2017, while the share of global merchandise trade has gone up to 6.9% of global trade. Roy states that we should understand these trends, given the existing trade wars that will affect the world.

Roy goes on to note that the fastest growing age group in the world is from 65 to 85 years old. He then posed a question – if one were to retire at 65 years old and pass on at 85 years old, how much money would one need to save? Many do not have the answer to this question due to huge unknowns such as inflation rate, taxes, healthcare costs, returns from financial instruments, and the circumstances one would be at when one retires.

Roy provided another statistic – the share of people in their eighties is also growing very fast. In ASEAN, it has grown from 0.4% to 1.1% and in Asia, it has tripled from 0.5% to 1.5%. This should also be of concern as there is a lot of cost involved and have caused most of Europe to go bankrupt. This is because approximately 80% of the taxes collected by governments go to this group of people.

He then brought in a concept – demographic dividend. This is often mentioned by many ASEAN leaders and Singapore was one of the biggest beneficiaries of demographic dividend in the 80s and 90s. Demographic dividend is defined as the process where a man and woman having born in a rural area, subsequently moved out to live in a city where they bear fewer children. These children are better educated and contribute more towards a country’s GDP. This would hence translate to a higher GDP per capita. Roy then provided an illustration where countries like Vietnam and Indonesia have higher GDP growth but their GDP growth per capita is in fact lower. He took a bullish stance on emerging markets and does not believe in the BRIC grouping (Brazil, Russia, India and China) as these countries have very different GDP growth per capita and therefore should not be grouped together but rather be analysed individually.

Thereafter, Roy asked the audience to consider consumers and life cycles. The richest age group in the G10 countries today belongs to the 65 to 84 year olds. This is because this group of people had the highest return of equity, with highest GDP growth per capita as well as the rise in real estate prices. They also had an increase in longevity, wealth, travel, leisure and luxury.

On the other hand, there are the millennials who desire to travel the world rather than settling down and this is disrupting the world trend. It is common to have 5 generations co-existing in the world with the oldest 2 generations having retired. However, we are still using old financial models. As such, we will
need the use of FinTech, technology and new models of optimisation and big data to understand these trends better.

In view of the above demographic trends, Roy proposed to abolish the mandatory retirement age system as this was based on a theory by an economist in 1982 when life expectancy was only 46 years old. A flexible retirement age would be more appropriate and many countries have implemented this.

He also mentioned that there needs to be greater fairness towards women with respect to financial inclusion and access. Women live longer than men by 3.7 years, but they do not have equal rights and labour participation, except in the Nordic countries. Therefore, we should employ more women with greater use of technology.

In addition, ASEAN is a very heterogeneous region with Singapore having the lowest fertility rate and 16% of the population being above 65 years old. However, the fastest ageing nation is Thailand – its people are growing older before they get richer. This is the challenge for most of the countries in Asia, Africa and Latin America.

In terms of immigration rates, it is relatively high at above 40% for the Western countries. In ASEAN, most countries do not see active immigration to their countries. With regard to the workforce, there are more male employees than there are female, and males are also drawing more salary than females. Hence, Roy purports that prior to implementing the immigration policy for developing countries, we need to understand the rationale, the costs and benefits, choosing between a short-term and long-term immigration policy, and to consider employing women into the workforce population. Moreover, with the advent of technology, it should allow women to have greater work-life balance which is often their priority.

Furthermore, the structure of GDP is important – for countries like Singapore, Malaysia and Vietnam, it is a relatively open economy and hence will suffer more as a result of global recession. The same can be said for Germany and US, whereby the former possesses a more open economy and thus its GDP growth will be more easily impacted.

There are three components that lead to GDP growth, namely working age population, labour productivity and labour utilisation. If we can predict these for any country, we would then be able to forecast its GDP growth. Roy has used this in 2014 to successfully predict US’ GDP growth. In relation to labour productivity, the group of people with the highest productivity would be the fresh graduates that are newly employed. Roy then reiterated that the young working adults and women are the group of people that can contribute to higher GDP growth in China, India, Switzerland and Germany. Hence, countries with young working adults forming a larger percentage of its population would have a higher chance at improving its GDP growth. This is subject to the fact that these people have gone through tertiary education and would therefore be able to optimise the use of technology. All in all, there are three crucial factors and these includes female labour force participation rate, female education level, and technology.

Demographics affect the short-term and long-term interest rates. Inflation is affected by demographics, and this is due to changes in workers’ wages. Hence, it is important to understand demographics in order to comprehend inflation.

Lastly, Roy ended off with discussing which sectors one can invest in; the first being pharmaceutical and healthcare, followed by financial services given the expansion of FinTech. The third sector would be leisure and luxury, due to the increased inequality of income, followed by infrastructure as we will require modern infrastructure for machine learning and artificial intelligence (AI).

The Big ASEAN Picture

Speakers

- Dr Dennis Khoo, Head of Regional Digital Bank and Digital Banking, UOB
- Arthur Lang, CEO, International, Singtel
- Lee Li Meng, Chief Strategy Officer, Razer

Moderator: Stefania Palma, Singapore Correspondent, Financial Times
Key discussion points

Stefania Palma kicked off the session by highlighting that the dynamics of ASEAN is crucial and explored how FinTech can tap into these dynamics. Mobile penetration is significant in ASEAN with its youths being reported to be online 6 hours per day. With this statistic, it poses a number of opportunities that can be tapped upon. Hence, Palma asked the speakers how and what is the biggest opportunity in their view.

Dennis Khoo responded that in this mobile age, there is great opportunity for companies to reinvent themselves. In ASEAN, there are at least 60% below 35 years old which translates to 400 million customers. In 2017, just under half of the population has a smartphone and the figure will increase to 65%. Therefore, this is a great opportunity from the banking perspective where we no longer require a bank branch. In the case of China, with the advent of companies like Alipay, financial services have seen plenty of improvement and one can foresee the same trend in the next few years. In summary, it is inevitable for UOB to rethink how the bank can serve these customers.

Arthur Lang agreed with Khoo. For SingTel, they have presence in many countries all over the world and 75% of their customers are below 35 years old. Given SingTel’s huge customer base, they have access to millennials habits and preferences such as the types of sites they go to, and the entertainment options they look for – and all these signify a huge potential in just ASEAN alone. Thus, SingTel’s strategy would be to target millennials and excite them with options. For example, millennials are the first group of people who might have watched their first movie via their mobile phones.

Lee Li Meng also agreed with Khoo and Lang. Razer is a brand that represents what millennials and youths desire, especially in terms of curated experiences. This has thus enabled them to build a global business with respect to software and hardware where they are able to engage gamers all around the world. Millennials are the group of people who use fiat money to buy virtual helmet in a game, for instance. Hence, Razer sees potential in the customers from Southeast Asia.

Lang then added on by agreeing with what Lee said. He mentioned that we all have more than one credit card on hand. However, most of the ASEAN population do not have a bank account but possess a mobile phone. Thus, we need to find a way to engage and reach out to this group of people, whether it is through gaming or not.

Khoo mentioned, given that the customers’ preferences are now different, UOB cannot adopt the same model else it would be owned by others. As such, the bank has made use of the omni channel model to provide a uniform customer experience across the different channels. Moreover, the bank is working on creating the first mobile-only banking solution.

When questioned on how one would try to increase presence in ASEAN market as well as the best way for doing so, Lang answered that it depends. With regard to payments, the big obstacle would be regulatory, which is often understated. For instance, e-wallets in Singapore cannot be used in Malaysia. Hence, there is a need to enter into star alliances - for example, SingTel’s collaboration with AIS in Thailand.

Khoo then replied that the ASEAN economy is relatively fragmented. In his opinion, to have a digital bank, the key is authentication. Unfortunately, at the moment, each country has their own method for doing so. Payment systems are also vastly different across countries and this translates into higher cost for businesses. With the aid of ASEAN government officials, they can look into reducing regulatory differences and getting more customers onboard to use mobile banking.

Lee added that there are two ways to increase one’s presence – either to gain market entry by oneself or to enter into partnerships. For Razer, they believe in going into partnerships. For instance, Razer has gone into partnership with NETS to target Singapore users.
Palma then enquired if it is possible for ASEAN to set up a regional body to help businesses enter the market more easily.

Khoo stated that it is a challenge to have common regulations and common organisation. Instead, it might be easier to create a working body where guidelines can be set for all ASEAN countries to choose between the pre-defined authorisation models for instance. In that case, banks can then focus on creating modules for these pre-defined authorization.

Lang added on that this is possible from a regulatory perspective. For instance, QR codes adopted by Singapore is standardised and hence allowed for seamless payments. The same can be said for Thailand and Indonesia. Players will need to work very closely, especially for money laundering as it is a complex issue that most have not fully grasped. This could be more challenging with blockchain technology. Lee agreed with the two speakers, and mentioned that ASEAN as a region are beginning to collaborate.

Palma then touched on the topic of e-sports, and Lee mentioned that Razer’s CEO is a pioneer in e-sports. There has been a huge growth from PC to console to mobile, and hence there is huge potential in Southeast-Asia, which is why they have partnered with SingTel.

Lang affirmed that it is an excellent partnership with Razer, and he can see a huge customer base in e-sports such as drone racing. It is therefore important that they can provide customers with what they want, and what engages them deep in their hearts.

Lee then continued to mention that Southeast Asia is an especially important market for e-sports due to the large pool of gamers out there. Lee also said that RazerPay is not just a wallet but a largest e-payment system from the recent acquisition of MOL.
Building Synergies between FinTechs and Financial Institutions in ASEAN
2.00pm

Speakers

- Dr Justo A. Ortiz, Chairman of the Board, Union Bank of Philippines
- Kamaludin Ahmad, Chief Executive Officer, Etiqa Life Insurance Berhad
- Chartsiri Sophonpanich, President, Bangkok Bank PCL

Moderator: Ivo Distelbrink, Executive Vice President, Head of APAC, First Data

Key discussion points

Ivo Distelbrink opened the session by noting a fundamental shift towards collaboration and partnership between FinTechs and financial institutions. These collaborations helped improve consumer experience across the ASEAN market. He cited the example of the mobile banking and transaction technology that has brought down financial accessibility barriers and transformed the consumer experience.

Chartsiri Sophonpanich pointed out that Thailand and the ASEAN market is a relevant example of prevalent globalisation, regionalisation and digitisation of platform. Digital banking has improved accessibility in rural areas, urbanised the banking experience and created a lifestyle change. He went on to define the main areas of digitisation within transaction banking, consumer banking, trade finance, wealth management and insurance. Disruptive FinTech have provided an alternative form of accessible and low cost payment options, encouraging banking players to transform in the evolving ecosystem. Agile fresh ideas will help identify and explore the impact and experience with the consumers. Internal change and new seamless process thinking are required with a combination of outside-in and inside-out design process.

Adding on, Kamaludin Ahmad mentioned that there is a difference in the working of small groups versus big group. Smaller working group teams tend to be more agile, easy to coordinate, productive, innovate faster and adapt to changes quickly. Large financial institutions should allow the agile working team to run their agile organisation without interruption.

In the Philippines market, FinTech players have converged into a symbiotic relationship with other technology companies, looking for commonalities to collaborate. Justo A. Ortiz said that the focus is on SME businesses, where FinTech provides a value proposition in the area of onboarding, alternative credit scoring and financing on a limited scale. He went on to provide an example of the important role the Philippines remittance service counters play when serving as a dedicated strategic aggregator in the rural areas with limited infrastructure. With the absence of a national digital identification system, the counters serve as a physical Know Your Customer (KYC) authentication process that ramp up the wallet payment service. Ortiz encouraged FinTechs and financial institutions to work closely with the regulators to enable an open minded and progressive regulatory evolution for the disruptive and innovative technologies.

The session ended with the speakers agreeing that financial institutions can play the role of an aggregator for various FinTech, industry and domain expertise verticals to assist in invisible streams to build win-win synergies.
ASEAN FinTech Leaders – Narrowing the Gaps
3.00pm

Key discussion points

Stephanie Magnus opened by introducing the speakers as four FinTech leaders in ASEAN who have harnessed technology in a consumer-centric way to provide cost-efficient services. She requested that each panelist introduce their respective companies.

Kelvin Teo introduced Modalku as an SME digital financing platform offering small loans via crowdfunding in Singapore, Indonesia and Malaysia. Modalku is backed by venture capital including Softbank Ventures.

Ron Hose introduced Coin as a mobile financing platform providing services to five million customers.

Thamavaranukupt introduced Ascend as a payment provider in six countries, which has two business models, namely e-wallet and agent banking (payment and financial services to the ‘unbanked’ in five countries).

Siew Yuen Tuck introduced Jirnexu as a financial services supermarket.

Magnus started by asking the speakers what opportunities and gaps they saw in the first countries they launched in and what strategies they employed.

Both Teo and Siew agreed that taking an established model from US, Europe or China and ‘copy-pasting’ it into local markets does not work because local nuances are not taken into consideration. Teo discovered it was better to use a ‘hypothesis testing’ approach as e-commerce in Southeast Asia is in too nascent a stage to receive a copy-paste of established models. Siew echoed to say he realised a better approach was to find problems to solve which, in turn, presents opportunities. Hose had a slightly different experience as he initially looked at market as a whole and realised that banking penetration impacts almost all individuals (more Filipinos have Facebook accounts than bank accounts) and corporates, and that there is a lot of friction in the banking system. Only then did he build a company to have positive social impact.

All FinTechs on the panel were respective ‘first to markets’. Magnus asked the speakers how consumer behaviour has changed since their respective launches and how they have kept up with the changes. All speakers said that slow adoption and subsequent trust of technology is a major challenge. Siew noted that even if technology is embraced, the vast majority of customers still want a human touch. Teo concurred and illustrated by saying many SMEs still want hard copies of documentation even if digital versions are available. Thamavaranukupt agreed but has found that certain segments take longer than others. Gamers, for example, are easy to target. However, for those who are more used to making offline payments, friction is still there and marketing has to include education. Even after education, there is still a need to establish trust. Hose finds it interesting that questions have evolved from trust-driven (“how do I know this is legitimate?”) to performance-related (“how quickly can I get my money?”). He added that there has been an evolution of consumer expectations: traditional banks versus digital platform as the latter expected to work immediately. Customer experience will be a main driver now.
Magnus sought the speakers’ opinion on whether technology is providing opportunities for cross-border expansion or whether there are still hurdles. Thamavaranukupt said that core technology can be applied across all countries. Payment platforms can scale across countries but regulations and infrastructure vary from country to country. So one tech platform would need different approaches for each market. Teo added that Asia, being so fragmented, makes it more challenging.

Speakers were asked to share their experiences in dealing with regulatory challenges and what opportunities and hurdles are across ASEAN. Siew said that regulatory sandboxes are useful, especially as solutions provided can help regulators to fulfill some of their goals, e.g. greater market transparency, greater competition. He also opined that education and literacy levels need to be addressed. Hose believes two things would help success: increased collaboration and find a competitive advantage that exceeds local players’ offerings.

Magnus followed with the question of how incumbent financial institutions and other startups view the competition. Hose notes three reactions of incumbents to disruption - frustration, indifference or innovation. He, however, sees more players coming in as an opportunity for collaboration to offer more to customers which leads to better and bigger ecosystem in the long term. Teo noted the same and expressed frustration that collaboration with larger institutions presents a challenge as there is frequently no coherent strategy so it is hard for startup to value add to the overall ecosystem, not to mention the key man risk if a contact at a bank leaves.

Thamavaranukupt agreed that collaboration is important as no one player has a big enough ecosystem on their own to succeed.

Magnus wrapped up the session by asking the speakers whether their initial vision has changed and what the next trends are. All voiced that the initial purpose of their visions have remained the same; what has changed is how they get there. Siew believes that the future lies in using big data to personalise financial services. Teo thinks that over time, everyone will offer lending and his hypothesis is that two to three players will collaborate, using their complimentary services to build up the ecosystem. Thamavaranukupt’s opinion on the future of payments is that more consumers will use digital payments but in what form depends largely on factors such as penetration of technologies like smartphones and/or availability of data services. His belief is that as digital payments grow, digital lending will happen organically as payments companies obtain more data to use for underwriting. Hose believes that the growth in FinTech will be explosive. As smartphone penetration happens, financial services infrastructure for delivering services to consumers will be at forefront of that growth. The unbanked now have multiple options and this optionality will only grow.
4.00pm

Blockchain & Banks

**Speaker**
- Ross Leckow, Deputy General Counsel, International Monetary Fund (IMF)

**Moderator:** Brad Garlinghouse, Chief Executive Officer, Ripple

### Key discussion points

The session began with Ross Leckow stating that the International Monetary Fund’s (IMF) mandate is to promote stability in the global financial system and hence there is a strong interest and involvement in FinTech.

Brad Garlinghouse elaborated that FinTech has allowed for banks to eliminate the need for pre-funding. The main challenge in ASEAN is that the cost of a normal wired transaction is high. He then asked what does FinTech mean to IMF.

Leckow stated that FinTech is an area in which IMF has put a lot of attention on, including blockchain technology, distributed ledger, big data, biometric data and mobile phone technology. At present, its 189 member countries go to IMF for advice and seek guidance on how to approach and unlock the potential of FinTech, as well as the corresponding safeguards. To that, IMF has published several initiatives including cryptocurrency and payments markets. Furthermore, IMF also engages actively with member countries, and discusses experiences in designing the regulatory framework. With the rising demands, IMF and World Bank recently organised the Bali FinTech Agenda to consider a set of 12 policy elements aimed at helping member countries to harness the benefits and opportunities of rapid advances in financial technology. Leckow then queried on the opportunities for blockchain.

Garlinghouse explained that regulatory clarity has a huge ability to drive blockchain technology. Singapore has done a lot to be a leader in the space while Thailand and Philippines have approved the digitisation of assets. Although it is uncertain, it can solve real problems for customers. Another form of dynamics would be the huge amount of remittances which are currently expensively taxed as part of cross border payments. With blockchain technology, this can drive down the operational costs. He then questioned on the characteristics of the ASEAN economy as to whether it can bring blockchain forward or stifle its path.

In response, Leckow shared that this is a very diverse group of countries and hence there are different needs and circumstances. Some countries would have more advanced policies in terms of FinTech, for instance, cryptocurrency. Despite so, there is a general openness and willingness to engage with the private sector across the region. The sandbox initiative has allowed new products to be tested as well as regulatory authorities to be informed and understand these solutions. Moreover, some of the ASEAN countries are part of the UK sandbox initiative. He also stated that the designing of policies around FinTech and the digitisation of the economy are two inter-dependent issues that must be looked at a whole. Lastly, there are gaps to be filled in various jurisdictions. One should not underestimate the importance of the legal framework, despite it not accounting for the new blockchain technology at present.

Garlinghouse went on to state that Ripple focuses on cross border payments. This is a huge pain for customers in terms of cost and time. After an immense amount of pure experimentation, Ripple has managed to reach out to more than 100 customers worldwide. He noted that CIMB in Thailand is also
aggressive in solving correspondent banking issues with blockchain and digitalised assets. He subsequently asked if IMF had discussed on the use of cryptocurrency.

Leckow recognised that each country has to decide on how they want to do it, while ensuring they mitigate the risks at the same time. There are several risks involved, given that cryptocurrency has a decentralised, pseudo and cross-border nature. These attributes enable it to be susceptible to misuse, such as tax evasion, money-laundering risk, fraudulent transactions and bypassing traditional financial systems. As a result, the international economy has also placed its efforts to regulate cryptocurrency. In terms of anti-money laundering, guidance has also been given to its member countries on how they can apply it to crypto assets.

When asked how will blockchain transform the financial sector and society, Garlinghouse responded that it would be good to take a step back to be aware of what we want to solve with the use of cryptocurrency. The Internet is now accessible to any data anywhere in the world, aiding the global commerce sphere.

Both then predicted what could potentially happen in the FinTech market. For Leckow, his view would be on the design of law and regulations surrounding FinTech. He elaborated that the depth of conversation on international levels would increase with the presence of financial stability board, Basel Committee. The same can also be said for member participation, and this is evident from the Bali FinTech Agenda. For Garlinghouse, he predicted that banks would begin to take over the custody of digital assets directly, given the huge profit margin that can potentially be made.

**Tech Transformaion for ASEAN – The Rise of B2B Tech**

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**Moderator:** Nigel Lee, Operating Partner, Apis Partner

**Key discussion points**

Nigel Lee started by stating that the technology in transformation and rise of Business to Business (B2B) is increasing and it can potentially be worth 2 trillion in 2020. There are three parts in such a transformation, and that comprises of an internal company, vertical and marketplace transformation. At the same time, it is noted that B2B is the core to digital transformation.

When asked what does B2B mean to the speakers, Clara Lee replied that banks need to figure out how to perform digital transformation and be focused on their digital offerings to customers. Based on the current landscape, FinTech is relatively new and hence there is a huge potential to unleash. RHB has collaborated with a third party company, launching the RHB Travel FX product in September this year. Partnering with FinTechs is crucial, as each FinTech company would have the ability to deliver a different type of product to the market.

In terms of the challenges and benefits of digital transformation, Damien Wong explained that traditional financial institutions (FIs) have legacy systems and were built with technology as a support tool rather than it being a core. On the other hand, FinTechs are digital natives and with this ecosystem, they are comfortable with providing digital solutions. Most of these solutions are based on open sources collaborations, and blockchain technology which may present a challenge for traditional FIs. As FinTechs are start-ups and have little to lose, they tend to use more open source software and will either compete or partner with FIs should they be successful. The presence of FinTechs can therefore help to create
tangible value for the customers of FIs as well as innovate further to enable the digital transformation to take place.

Benjamin Mah added that a challenge to FinTech would be for central banks to accept such technologies. Hence, he would like to applaud MAS and central banks for accepting the sandbox initiative as these would encourage inclusiveness from start-ups to SMEs and big corporations. In the current world, it is impossible for a company to be able to solve real world problems as it is often far too complex to do so. Collaboration with key partners is very important, hence resulting in extensively building up the B2B model in the ecosystem. In this case, both banks and FinTechs would have a win-win proposition. Despite so, based on how the ASEAN landscape is changing, there is no single formula to ensure sustainability for the next five years. The three key important factors are people, processes, and technology and no one company can possess all.

Lee agreed with both speakers. Solutions need to be a win-win for both companies and customers. Banks tend to be inside out, slow and hardwired in implementing changes. As such, they may not be as customer-centric which FinTechs can complement. Conversely, FinTech takes a slightly more narrow solution while banks are a natural platform to bring FinTechs and piece them together, with each FinTech bringing a differentiated product. Moreover, banks have the customer base and trust of its customers which FinTechs lack.

When asked on how RedHat uses platforms to connect to banks, Wong responded by agreeing that no company can live in silos in today's world. Moreover, it is accepted that the future is unpredictable, and disruption can happen anytime and anywhere. API technology is a fundamental way to collaborate seamlessly. Also, to build platforms fast, one can use DevOps and containers. Despite so, what is more important would be the culture of collaboration. It is also crucial as to how organisations react to failures. If they can react positively to failures, innovation will be able to flourish. The same can be said so for partnerships, where both companies should recognise that collaboration is important.

Mah then added that based from his experience in the start-up company, a key point would be trust and assurance. When dealing with huge contracts and huge FIs, posturing of trust is important and this comes from wanting to build a secure structure including APIs and gateways. It is important to be able to build an ecosystem and to facilitate discussion with governments from around the world. Also, a lot of effort would be needed in forming a platform of trust – especially in the aspect of compliance.

When queried on what is the most important piece of technology from a B2B perspective from the last 6 to 12 months, Lee stated that it is the adoption of cloud and artificial intelligence (AI) in automating processes in banks and enhancing customer experiences. RHB has utilised the cloud this year which has thus brought down its infrastructure costs dramatically. With that, the velocity of market entry by the bank would be much faster and easier. In addition, collaboration with FinTechs would also be made easier.
Borderless FinTech and Ecosystems: The Global Community
5.00pm

**Key discussion points**

Sng Khai Lin kicked off the session by highlighting that there are number of countries and ecosystems which are competing with each other for the title of best FinTech hub, for example, Singapore versus London. She asked the speakers to share their viewpoints on whether they think that the various ecosystems are competing with one another.

Natalie Ceeney mentioned that right conditions are needed to be successful in the FinTech ecosystem. Right talent, capital and regulatory support are key requirements for an effective ecosystem. FinTechs thrive on common regulatory patterns and will only survive in a jurisdiction which provides the right conditions.

Alex Scandurra mentioned that talent is attracted by conditions conducive towards success. Increased liquidity and successful financial services industry also drive FinTech. Scandurra opined that competition is not a factor in the FinTech landscape. There will be another billion people in working class in Asia in another decade. In order to fuel that demand and operate successfully, collaboration and partnership is needed.

Sng noted that the FinTech ecosystem includes the following four factors - Talent, Capital, Demand and Regulation (based on Deloitte study conducted across 44 global FinTech centres). Sng asked the speakers if there are any initiatives in their jurisdictions to address the talent related challenges.

Ruiz noted that the ecosystem is important. Australia and Singapore are examples of good FinTech hubs. The key question to be answered is how can FinTechs gain scale. Efforts should be made to obtain standardisation through integration of different players in the FinTech space.

Ceeney highlighted that lack of talent is the single biggest issue faced by the United Kingdom (UK) FinTech market. Currently, none of the FinTech markets can say that they have enough talent. Within UK, Brexit has focused the view on growing talent locally. In the UK, there is only 29% of women working in the FinTech space. Hence, there are lots of opportunities in the FinTech space to grow the talent pool.

Zubairi mentioned that media normally tends to glamourise the young successful entrepreneurs in their twenties with no prior banking experience. The average age of a FinTech entrepreneur is 45 with most having banking experience. The talent pool needs to have banking, technical as well as entrepreneurial elements in it. Zubairi highlighted that skills are more important than knowledge. He also noted that talent flow is fairly fluid in EU.

Sng noted that policy and regulation are incompatible across states, countries and regions. She asked the speakers on their recommendations for tackling regulatory changes for a company that is expanding.

Scandurra noted that ASIC has been partnering with regulators across other jurisdictions hence making scalability easier. Regulators are also thinking about the need to regulate FinTechs. He opined that FinTechs will need less regulations. Risk based approach to FinTech regulations would be more effective. Collaboration across regulators is also easier for the FinTechs to operate. Additionally, the talent pool is likely to be attracted to go to places where they have highest likelihood of success.
Sng noted that she was able to obtain a licensing exception from the Australian regulator within six months due to her existing license in Singapore.

Ceeney mentioned that there is a UK-Singapore bridge in place as well as G14 initiative where 14 regulators are working together to solve FinTech related issues. None of the regulators have figured out the best way to regulate cryptocurrency. She also noted that the easier the regulatory environment, the easier it would be for FinTechs to thrive.

Zubairi highlighted that the advantage with EU is passporting. An entity regulated in one EU country has access to lots of markets. Regulations are harmonised across borders and financial markets work smoothly. He emphasised that no separate regulatory lens should be needed for FinTechs. He highlighted concerns over cryptocurrency and noted that bodies like IMF should take up and discuss these macro issues.

Ceeney mentioned that there are emerging business models like cryptocurrency. It is challenging to know the answers without having tried or experiencing the business models. She opined that the regulators are potentially waiting for the business models to playout before making a decision. She stated that she does not agree with the point that various regulators are taking different approach on cryptocurrency.

Sng enquired the speakers about the FinTech partnerships in place to foster collaboration regionally. Scandurra stated that startups are looking for customers. He enables a linkup between startups and large organisations thus managing demand and supply.

Ruiz mentioned that we cannot wait for regulators to come together on a consensus. There is existing partnership between FinTechs and Financial Institutions. He opined that no additional regulations are required for FinTechs as they are just enhancing financial services processes. Regulators should merely focus on Financial Institutions.

Scandurra stated that his firm ran an innovation and entrepreneurship competition in China. The objective was to pick best start-ups to incubate with company. Scandurra’s firm helped the entrepreneurs to meet the demand and address issues of the Australian corporate companies. In turn, the entrepreneurs enabled Scandurra’s firm to leverage their network in China and expand its client base.

Ceeney highlighted that as part of the G14 initiative, there are 14 regulators working together to solve FinTech related issues. She expressed enthusiasm about open data and the EU’s revised Payment Services Directive. As a result of these two initiatives, people’s personal data can be used to provide new services.

Sng asked the speakers, given the focus of the session on ASEAN, to share any specific initiative from their ecosystem which would be relevant.

Scandurra stated that Asia has an enormous unbanked population. Australian banks have since pulled out of Asia as they have not been profitable. As FinTechs have a low cost footprint and digital presence, it would be much easier for them to target the unbanked population. Once banked, data from these customers can be used effectively for open banking opportunities.

Sng asked the speakers how they would view the ecosystem working more closely together.

Zubairi highlighted that unless there is something underlying for both sides, the collaboration is unlikely. Things to consider would be knowledge and skills sharing, access to each other markets (cross cultural trainings), and direct connectivity for institutions etc.

Ceeney noted that the relationship between UK and Singapore is critical at the policy level. Capital used by FinTechs is global. Huge proportion of this capital comes from overseas (outside UK). There are lots of foreign FinTechs either operating in UK or looking to operate in UK. Similarly, lots of UK based FinTechs are looking to expand to Asia.

From a personnel perspective, 42% percent of employees in FinTechs are non-British nationals.
Ruiz mentioned that there should be a memorandum of understanding (MOU) to be agreed on to enable connectivity across regions. He noted that we need to start thinking about a global market place essentially on the lines of Apple iTunes whereas FinTechs can come from anywhere in the world and provide services anywhere.

Zubairi disagreed with the point made by Ruiz stating that there are barriers to enter various markets. He noted that his organisation facilitates processes to reduce these barriers. He cited a Temenos survey related to procurement issues stating that lots of organisations have a two to three years procurement cycle.

Ruiz highlighted that Financial Institutions are working with his organisation which acts as conduit between banks and FinTechs. This results in certain liability related issues, some of which are covered by his organisation and some by partnering FinTechs. B2B collaboration is easier compared to B2C collaboration. Collaboration at the business level is key so that ideas can be effectively shared across the organisations.

Sng cited that the Accelerator or Incubator model have been considered as a faster way for going into the market. She enquired the speakers on whether the accelerator model actually works.

Scandurra mentioned that accelerator model is not an effective strategy to go to a market for companies looking for validation or exploratory exercise. The companies should focus on developing track records, growth, and validation in home market. Scaleups, not startups, have a higher success rate in areas which require defining the problems to solve and working with the institutions for solving the problem.

Zubairi noted that in the accelerator model, corporate sponsors do not know what to do. Scale ups are more effective for solving problems.
Deloitte Stage: Future of Money

Cash, Cheques, Cards, Crypto: The changing definition of “money”

1.00pm

Key discussion points

Patrick Murck opened the session by highlighting that it has been a continuous evolution over time in the various payment infrastructures to meet the needs of the society, whether it is paper cash, bitcoins, credit cards or cheques. One of the key questions he brought up was whether FinTech is driven by technology or by market demand.

Pieter Franken commented that technology has always been an important part of banking and it has evolved tremendously since the early 1990s. He noted that the cost to build infrastructure in the past was humongous, with banks being the main drivers of such technology that were difficult to maintain. He highlighted that a very important aspect that sets the current new technology apart from the past is the accessibility of technology, as the cost of entry for technology regulatory requirements were very much higher in the past.

Vijay Chandok mentioned that the growth in technology in the past eight to 10 years resulted not only from the accessibility and availability of technology, but also the decrease in cost. There has been a convergence between the needs of the market and technology providing solutions. Technology has also been seen to provide solutions that are outside market needs.

John Lepore was of the view that the needs of the market has been driving the use and uptake of technology. Some of the needs are driven by regulatory environments that encourage the use of different types of technology, but these technological advancements are ultimately addressing the needs and demands of the consumers.

Bénédicte Nolens brought in her own personal experience from the past, where the use of laptops and mobile phones were very uncommon, in contrast with the prevalence of mobile phones in the current China market. Nolens further reiterated that financial inclusion and the continuation of working towards intra-mobility has got to be a goal in and of itself.

Murck commented that one instance of the government spurring on the evolution of money towards a more technologically driven future is India, with the demonetisation and the introduction of Goods and Services Tax (GST).

Chandok noted that these factors have caused massive disruption where people migrated from cash to non-cash methods of transacting. There have been arguments that the total amounts of currencies in circulation are back to levels before the digitalisation, but the level of digitisation has also increased.

Speakers
- Vijay Chandok, Executive Director, ICICI Bank
- Pieter Franken, Senior Advisor, Monex Group
- John Lepore, General Counsel, Policy and Advocacy, MasterCard
- Bénédicte Nolens, Head of Regulatory Affairs for Asia & Europe and Chief Commercial Officer, Circle Internet Financial Limited

Moderator: Patrick Murck, Special Counsel, Cooley LLP
Chandok further pointed out the three important lessons to learn from this, with the first being that government intervention in the form of policies is essential to alter human behaviour, together with the help of physical capabilities such as technology. The second lesson was that one-time initiatives are not enough, and the last lesson being that continuous investment in infrastructure is important to support the change.

In the discussion of how technology can be used to create inclusive economies or enable new markets, Lepore shared his experience from the partnership between Mastercard and Grab in Southeast Asia in developing both prepaid and virtual cards that address unmet needs of customers. The cards created opportunities for individuals without bank accounts to use cash in a variety of easily accessible ways to top up their Grab accounts. He further mentioned the use of QR codes, which allow small merchants to be able to engage in digital transactions and reduce reliance with cash.

Pieter talked about the different aspects of how technology will be reshaping the money and payments infrastructure. More payment providers are coming into the market to provide payment solutions, and these new entrants are not banks. Rather, they are high-tech companies that are bringing in new ideas and solutions for customers and businesses. The changes will occur very quickly once interests are piqued in the markets and if there are adequate government interventions.

Murck acknowledged that the adoption of new technology inevitably brings about various types of risks. From a policy or regulatory point of view, Nolens shared that a key aspect to capturing the benefits of technology while mitigating the necessary risks is the legitimacy of businesses and technologies that are adopted. In this regard, legitimacy refers not only to complying with laws and regulations, but also with the principles of laws, where she quoted the laws around governance that was implemented within her company. Proactive communication from the regulators to show that they are open to innovation and committed to innovation developments is also important to facilitate the adoption of technology.

To conclude, each speaker shared their personal key message of the session. Franken noted that the future of technology is very much dependent on the future of data and Chandok highlighted the immensity of the changes in technology, where in his view, banks are the parties that are impacted the most. Lepore highlighted the power of collaboration in the development of technology and Nolens believes that digitisation will bring about financial inclusion in multiple ways.
CEO in Conversation: Innovation Transformation vs Future Revenue
2.00pm

Key discussion points

Before initiating the primary discussion, Pat Patel asked the speakers to share their opinion on whether they viewed certain innovation related topics (listed below) as underrated or overrated within banking.

- On "Innovation in Banking", Vaswani and Trần Hùng Huy felt it was overrated. Steinmüller felt that it was underrated.
- On "Banks' ability to innovate", Vaswani and Trần Hùng Huy felt it was underrated. Steinmüller felt that it was overrated.
- On "Cryptocurrency", Vaswani felt it was underrated. Trần Hùng Huy and Steinmüller felt that it was overrated. Vaswani emphasised his personal view that that opportunity in cryptocurrency is significant.
- On "Open banking", "Value of FinTech to Bank collaboration", "Platform business in banking" and "Banks as software houses", all speakers agreed that they were underrated.
- On "Setting up digital bank subsidiaries", Vaswani and Steinmüller felt that it was overrated. Trần Hùng Huy felt that it was underrated. Vaswani stated that it is hard work to manage one brand hence separating and managing another digital subsidiary does not add value. Steinmüller mentioned that in order to run a digital bank, the mentality of the bank would need to change. Trần Hùng Huy felt that banks need to get into the longer term ROI mentality in order to get benefits from a digital bank.
- On "Innovation labs", Vaswani felt that it was overrated. Trần Hùng Huy and Steinmüller felt that it was underestimated. Vaswani emphasised that taking and incubating the ideas from the innovation lab is a big challenge. Steinmüller compared innovation labs to scouts of good football team.

Patel highlighted that the focus of session was on taking a pragmatic approach to balance stakeholder priorities and consumers’ needs. Before jumping into the main discussion, Patel enquired the speakers on their views on what innovative transformation meant to them. Vaswani mentioned that over last ten to fifteen years significant changes have happened within banking. In the past, focus in banking was on becoming best in class in products and cross-selling. Now, the focus has shifted to innovation in customer experience. Vaswani highlighted that the organisations are facing challenges to transform from being product to customer centric.

Patel asked Trần Hùng Huy about how his challenges are different as he is operating in a market where there is lot of innovation occurring. Trần Hùng Huy emphasised that leveraging the existing infrastructure for innovation is important. Steinmüller outlined a transformational initiative at Deutsche Bank. He stated that the bank has a system which collates rewards from different cards into a single
wallet. Although, this has nothing to do with banking now, payment schemes would be added in the system in phase two. The system will also enable access to client data.

Patel enquired about transformation initiatives where value was created as well as the evaluation criteria for these engagements. Vaswani mentioned that high customer engagement is the most important criteria for evaluation of projects. He highlighted the enhancements made in the recently launched mobile banking application where the merchant logo for a particular transaction as well as the location of the transaction are shown. This not only increased the customer experience and loyalty but also reduced the number of calls to customer center hence reducing the cost.

Patel enquired about the experimentation within the bank and how these are balanced with the revenue challenges. Trần Hùng Huy stated that experiences are important to achieve the end goal. It is also important to understand the pain points and challenges faced by the customers. He talked about the mobile relationship manager application which is used by the bank for cross selling where relationship managers are given suggestions for products based on customers past activities. This is an example of where the “bank is going to the customer”.

Patel enquired about the level of experimentation needed and gave an example of Ping An which has 15,000 developers and uses the innovation internally as well as market it as white label apps. Trần Hùng Huy emphasised that putting a percentage on experimentation is not fair. He also noted that they have embedded innovation as part of Business as Usual (BaU) and encourage employees to address customer challenges.

Patel asked Steinmüller about the Deutsche Bank innovation labs, and the number of deployed resources and dynamics. Steinmüller mentioned that they have innovation labs in London, San Francisco and Berlin (Singapore will be having a lab coming soon). Teams are led by project managers and will have a mix of internal and external staff as well as a diverse skillsets including banking, technology and FinTech. The key to success is to learn from mistakes.

Patel highlighted that the speakers talked about the idea of celebrating failures and asked them to share about their biggest failure and what they have learned from it. Vaswani mentioned that there were couple of transformative engagements which did not achieve the desired outcome (for example, personal data related initiatives). Lessons learned include more effective user testing and not to compromise on customer needs. He noted that that they take learnings from failed initiatives and move on.

Patel enquired about the criteria used by the speakers for evaluating the innovation initiatives. Vaswani mentioned that customer adoption and customer engagement is the key criteria rather than return on investment in first year. He highlighted the Beta testing site called Launchpad used by Barclays. This site has 20,000 real customers. Any new application launched with FinTechs is shared with real customers for feedback.

Patel cited that in his discussions with other CEOs, he has noted that organisation structure project returns across three horizons: Horizon 1 (1 to 3 years), Horizon 2 (3 to 5 years) and Horizon 3 (5 to 10 years). He enquired how the projects are structured across speakers’ organisations. Vaswani replied that they do not take into consideration the time horizons. The projects are structured as enhancement of business models, extension of business model and development of new business model. Trần Hùng Huy added that criteria for his bank included projects which fit unique needs for the markets, projects which enable the bank to leapfrog technologies at competitors and innovation that promotes profitability.

Patel enquired about the initiatives that have been running for more than five years. Trần Hùng Huy replied that initiatives related to customer value proposition normally run for around two years. Initiatives related to vision (e.g. ACB as leading retail bank, integrated technology solution) would normally run for more than five years. It is also important to evaluate whether the local population is ready for the innovation. Steinmüller mentioned that time depends on the project complexity. He acknowledged that there will be projects where return on investment would not be achieved in the first few years.

Patel cited that there are limited success stories of startups and FinTechs working successfully with banks. He asked the speakers for their view on what is required to make this partnership a success. Vaswani acknowledged there are collaboration challenges between FinTechs and banks. In addition, the beauty of startups is that they have grown in today’s world. The biggest advantage that the banks have is their customer base and FinTechs should recognise this as an opportunity. He then shared an example
of an engagement with MarketInvoice and how they effectively worked with Barclays. Patel asked the audience and the speakers for their view on the best way for the banks to innovate - internally, partner with FinTechs or leverage externally. Vaswani mentioned that there is no single answer and adopting a mixed approach is the way forward. If he had to pick one answer, he would pick the option of leveraging externally. Trần Hùng Huy opined that the banks can innovate internally but the key question is whether the level of innovation is sufficient to address the business problem. Steinmüller mentioned that all three approaches should be leveraged. If he had to pick one answer, he would pick the option of developing it internally.

Patel enquired about the strategies to overcome collaboration challenges between FinTechs and banks. Trần Hùng Huy mentioned that ACB had a highly recognised training centre. The bank learned that this strength could lead to weakness due to the ever evolving market, regulations and customer requirements. As a result, a paradigm shift was needed when the bank partnered external partners to conduct workshops which enabled partnership and ensured that the reasonable innovation view from outsiders is captured. Vaswani highlighted the Beta testing environment is an example of such a collaboration.

To wrap up the discussion, Patel asked the speakers to share their opinion on whether they viewed certain innovation related topics (listed below) as underrated or overrated within the banking industry.

- **On “Chief Innovation Officers”**, Vaswani and Trần Hùng Huy felt that they were overrated as the organisation cannot solely rely on one person to innovate. Steinmüller felt that they were underrated as it is important to have a role which drives innovation in an organisation.

- **On “Artificial Intelligence” and “Brexit”,** all speakers agreed that both were underrated.

- **On “Machine Learning”**, Vaswani and Trần Hùng Huy felt that it was underrated while Steinmüller felt that it was overrated.
Globalisation of Domestic Payment Networks
3.00pm

Speakers
- Jeffrey Goh, Group Chief Executive Officer, NETS Group
- Michael Moon, Head of Payments Markets, APAC, SWIFT
- Wendy Sun, Senior Director, Tencent
- Hiromi Yamaoka, Director General of Payment and Settlement Systems, Bank of Japan

Moderator: Jan Ondrus, Associate Professor of Information Systems/ Associate Dean of the Faculty, ESSEC Business School

Key discussion points

Jan Ondrus opened the session by emphasising the need for a practical discussion around expanding domestic network payment systems across borders. Specifically, what are the problems that need to be resolved.

Wendy Sun shared that Tencent is responding to their domestic users looking to use WeChat Pay when travelling abroad. Noting that mobile payments are common and widespread in China, the challenge that Tencent faces is to set up solutions that allow their huge user base to have the same user experience on the WeChat platform while they are abroad.

Michael Moon shared that SWIFT’s main challenge is about reducing business process friction. He noted that their existing payment technology is already very efficient and effective, costing mere cents and taking only two to three seconds to complete a transaction securely. He shared that SWIFT has introduced SWIFT GPI (Global Payments Innovation), a new standard in global payments that ensures full transparency in fees and has unique tracking of transactions amongst other benefits. However, drag still exists because of processes such as ensuring transactions and each party meet the requisite compliance standards, Know-Your-Customer (KYC), and liquidity demands.

Jeffrey Goh shared that NETS faces similar user-centric challenges to Tencent, in that domestic users demand that NETS keeps up to date with the latest mobile payment options and that these options allow for overseas use, especially in countries frequented by Singaporean users, such as Malaysia and Thailand. Goh shared that in the past 12 months, NETS has introduced NETS QR for payment in taxis. In the pipeline, NETS also intends to bring 4,000 to 5,000 merchants in Malaysia onto the platform, so that NETS users from Singapore are able to use NETS while in Malaysia, with a good exchange rate.

Hiromi Yamaoka provided a public sector perspective, noting that the common aspiration amongst all stakeholders is for a faster, cheaper and safer payment system to serve everyone, and that the central bank had most to offer in terms of promoting safety. He noted that some measure of harmonisation of regulatory standards across jurisdictions was necessary to smoothen cross border transactions. Apart from that, common messaging standards across countries were important too. To that end, the Japanese central bank has embarked on joint projects to create linkages with the Hong Kong Monetary Authority.

Moon concurred Yamaoka’s point on harmonisation and standardisation, recounting SWIFT’s internal test to see how fast they were able to transfer money from a handful of countries, first through their global payment transfer standards, then onto domestic payment networks, before reaching consumers. While it was technically possible to do these transfers within seconds, the burden remains that such transactions had to be worked out country-by-country due to differing standards.

Goh offered a different perspective, suggesting that the harmonisation of standards will take too long, and partnerships with local players and networks would be more efficient and effective.
Sun agreed with Goh that the partnership model was the way to go, but added that local market education was still going to take effort. Sharing from Tencent’s partnership experiences, she highlighted that it was still necessary in the earlier stages for Tencent to educate their local partners on what mobile payment was, and in turn, trust that their partners can educate their merchant networks.

Another issue which Sun raised was that not all countries had frameworks around new technology like mobile payments, and this caused delays as regulators had to consider what to do when faced with disruptive technologies.

On Ondrus’ prompt about what sort of governance structure was most suitable for cross border payments, Yamaoka shared his view that the private sector should be the main driver as they were more superior to the public sector in driving innovation and user adoption of new technology. This would, in turn, maximise individual user welfare since many emerging technologies appear to have positive externalities stemming from the network effect. Moreover, with data becoming so valuable for businesses, Yamaoka felt that the public sector should not crowd out the private sector by intervening too much.

The other speakers shared that government involvement is still important for regulation, as the financial industry is still heavily dependent on that to keep trust in the payment system intact, regardless of new inventions.

Sun shared further that regulators can also have a role in promoting the adoption of new technology, citing the example of WeChat Pay’s Hong Kong wallet being allowed to make payments in a limited area of mainland China— an initiative enabled by the Hong Kong Monetary Authority and the People’s Bank of China. She emphasised that technology capability was hardly the issue; instead, the biggest hurdles were about all parties finding and agreeing to a mutually beneficial business model that regulators can agree to.
Challenges in Payments Oversight & Regulation
4.00pm

Key discussion points

Ayman Hussein opened the session by noting that, for developing countries, recent changes in technology are not a threat but an opportunity. In Egypt, for example, there is a mobile penetration of 112% with a young population, therefore FinTech and new technologies can help increase the inclusion statistic by 32%. The Central Bank of Egypt has established the National Payment Council, headed by the President of Egypt, and the Less Cash Transformation Framework, in order to lead transformation in this space. It has also face-lifted its mobile money ecosystem and reached around 11.5 million mobile money accounts with complete interoperability among the different players. In December, it will launch the National Payment Scheme, as well as introduce a unified QA code. Regulators should be a catalyst for change in order for these transformations to be successful.

Sharon Yang spoke about the US approach to continue to modernise the US monetary system. CFTC and SEC have established innovation hubs for the private sector, which enables active collaboration. The Fourth Financial Regulatory Report talks about appropriately calibrating regulation so as to enable growth while still maintaining high level of standards. Yang stressed on the importance of data, which is foundational to transforming financial services. From a regulatory standpoint, data ownership, data privacy and data protection need to be considered.

Ong Chong Tee highlighted that innovation is not new to financial services or the regulators. However, what has changed this time is the technology revolution or the sharing economy, which has opened the boundaries to innovation across sectors. As such, regulators should ask the question – are the innovations purposeful? If it creates better customer experience, eliminates customer pain points, reduces cost, then why not? Regulators should then consider risk transmission across sectors, including Anti-Money Laundering (AML), conduct and cyber.

Klaus M. Löber noted that cross border remains as a costly, slow and cumbersome process. Now, there is not only a need but a demand by users to do away with the age old structures such as remittances and correspondent banking. There is a range of new providers, channels and settlement services. However, for them to work, there is a need for interoperability across borders and countries. Regulators and standard setting bodies need to come together to define baseline technologies and standards.

Hussein added that the Central Bank of Egypt is collaborating with African and Arabic countries to constantly improve the cross border payment systems, including RTGS systems across the countries and enabling acceptance of mobile money for remittances. The challenges of screening against negative lists and AML in real time remain the top points to consider when developing such technologies.

Ong highlighted that the ultimate goal of regulations has not changed – safety, reliability, customer protection and AML, cyber and conduct risk management. Now regulators need to also consider the risks associated with inter-sector innovation. One way to address this, similar to what MAS has attempted, is via the regulatory sandbox. MAS works closely with the company that has a new business model or a new technology, to define the parameters, constraints and value proposition for utilising the sandbox, in
turn learning with the company through this active process. The companies get to test their new innovation in a live environment and assess if the product is fit for market. The new landscape also forces the regulator to think whether the existing regulations would apply to the new players. MAS has consulted on a new Payment Services Bill, which is more activity based rather than entity based. This modular approach attempts to enable innovation, while maintaining the regulatory standards.

Hussein spoke about cyber security as a key risk that regulators need to consider. The Central Bank of Egypt has set up a Cyber Security Centre to support the Banks in this area. There is also a need to consider consumer protection. Similar to MAS, the Central Bank of Egypt is working to develop a regulatory sandbox and the Payment Systems and Payment Services Act.

To the question “Are FinTech’s under-regulated, or are banks over-regulated?”, Yang spoke about seeking to standardise and coordinate regulations, particularly across state and federal regulators within the US. She mentioned that there are shared policy goals including expanding the reach of payments, improving efficiency, reduce cost for all players, facilitate more effective regulation including AML and anti-fraud efforts, and increasing ability of financial services to serve all sectors of the population.

Löber added that technical standards at times could affect the possibility to innovate, where such standards are not technology neutral. In such cases, there should be a flexible approach where exemptions could be granted to those who are not able to adopt the prescribed technology. Another consideration is proportionality, where the level of regulation applied should be dependent on the entity type, for example, FinTechs vs banks. Finally, there is a functional approach which focuses on the services provided, rather than the entity. However, regulators need to constantly adapt, cooperate across authorities and adhere to global standards. Ong added that the regulations that apply to different entities should be commensurate to the services provided and activities conducted by the entity.

The speakers advocated the need to support innovation in respect to cryptocurrencies. Yang noted that the G20 has coalesced around four principles – promoting innovation, supporting FATF regulatory standards, protecting investors and monitoring if there is a financial stability risk vis a vis cryptocurrency assets. Löber mentioned that the usage of cryptocurrencies as an alternative means of payment is challenging. One possibility to establish such alternatives would be for a central bank itself to support digital tokens or crypto assets.

The speakers closed the session by summarising their key points including the importance of data, collaboration of regulators in order to address cross border payment pain points, active private sector engagement and risk management of new business models.
Partnerships: The Way of the Future
5.00pm

Speakers
- Matt Dill, Senior Vice President, Head of Digital Partnerships & Ventures, Visa
- Tan Su Shan, Managing Director & Group Head, Consumer Banking & Wealth Management, DBS Bank

Key points

Matt Dill opened the session by talking about the challenges of the current payment methods. Wallets were slow and expensive and NFC stood for “Not for Commoners”. However, digital partnerships are transforming this landscape. Success of such digital partnerships hinges on commercial programmes, licensing and venture investment. All this has led to an extended reach of payment services and availability of financial services. Digital partnerships have also enabled the development of borderless payment ecosystems.

Dill went on to talk about how Visa has leveraged these digital partnerships to identify gaps in the system, together with their users. Through this process, Visa has been able to develop infrastructure to support secure payment systems based on the cloud and token systems. The infrastructure today is open and accessible, making it easier for small companies to grow.

Tan Su Shan highlighted that the aim of DBS is to be intuitive and seamless. DBS hopes to develop an ecosystem that combine multi-faceted aspects of customers’ lives. Through digital partnerships, DBS aims to achieve a win-win-win situation. The bank maintains its relevance by helping partners get access to scale and the customer enjoys better customer experience.

Tan also announced DBS’ partnership with Go-Jek, one of South-east Asia’s most iconic technology companies, to offer regional payments services.

Tan closed the session by speaking about the three pillars of the DBS ecosystem:

- Participate – by enhancing existing systems and services
- Orchestrate - by matching buyers and sellers, and developing a seamless way of life
- Create – by piloting wearables for lifestyle tracking
AMTD Stage: Market Infrastructure

Blockchain Opportunities and Threats
1.00pm

**Key discussion points**

Michael Casey opened the session by sharing the current trends in investment community, particularly in the United States. He confirmed that bankers were discussing cryptocurrency as a new potential asset class. However, he felt it might not be as cut and dry, as cryptocurrency is a very different investment than what the financial sector is used to. The core underlying idea is decentralisation, which, in some respects, imagines the very end of the financial system that is investing in it. As such, there is a contradiction in this process.

He raised a key question on blockchain – "how do we change the underlying record keeping system of the economy itself?" Centralised record keeping had a single problem – a high cost of trust. Casey went on to give examples of the hidden costs of trust that society has borne, such as the inability for a slum dweller in Nairobi to monetise or sell his house as the record keeping system is untrusted.

What blockchain represents is a trust minimised record keeping system. It is a distributed ledger based on an algorithm, which allows users to arrive at ongoing consensus on the updates to the ledger. Casey used the term "immutable" to describe the ledger as there is no way to amend the ledger, it is only possible to append to the ledger.

This is not just a way of doing things more efficiently; it is a new social paradigm – a fully decentralised, distributed peer-to-peer system. For its success, technology and regulations are needed to support decentralised exchanges, custody solutions, blockchain-based accountability and exemptions for certain utility tokens. Casey closed by confirming blockchain is very powerful and potentially disruptive.

Brian Behlendorf noted that this year is one where a number of proof of concepts and pilots have been productionised. He gave the example of DLT Singapore working with DBS Bank and 140 different trading associations to support 4500 different farmers by using blockchain for trade finance. There are multi-party processes involved across borders and regulatory authorities, and blockchain can help cut cost, open up to a much larger audience and get the big banks involved as well.

Jim Sullivan explained that he sees two core areas for blockchain – trade finance and supply chain. The economy is approaching something close to a US$1.6 trillion trade finance gap, which disproportionately affects SMEs. Sullivan spoke about an advisory committee for the United States Secretary of Commerce that is working to evaluate different standards across the world and the feasibility of leveraging blockchain in trade finance. Similarly, supply chain is heavily paper based and inefficient with multiple interventions in the process. As such, there is tremendous opportunity in these two areas.

Virgil Griffith mentioned that there is a quote "Unbank the Bank", which relies on the idea of coming up with more efficient processes rather than relying on the current infrastructure.
Sullivan mentioned that there is a rise of protectionist measures in the digital space – privacy and cyber security. Regulations are rather broad on these matters. It takes a lot of effort to have bilateral discussions across countries and develop a baseline fundamental standard, one example being the APEC Cross Border Privacy Rules System (CBPR). Sullivan noted that at the policy level, blockchain will allow for facilitating free flow of data.

Behlendorf mentioned that a lot of the hard work going on in the Ethereum community allows for interoperability, such as in the programming language and naming standards. He gave the example of the Diamond ledger, which has enhanced the efficiency and reduced the cost of maintaining a distributed ledger, in accordance with the Kimberly process. He went on to talk about how blockchain has changed the concept of data management. Data will be sovereign to the individual, which in turn reduces corruption and falsification of data.

Griffith provided a view of what the future of trade would look like, where each shipment would be automatically tracked, including a history of all ports and routes taken. Smuggling would become that much harder and custom standards and checks would be harmonised across the countries.

The session closed with an agreement that the key is to have consensus on the standards and regulations for the data to flow across borders.
Capital Markets: Killer Use Case for Blockchain?
2.00pm

Key discussion points

Chris Church introduced the session by reflecting on developments since the first Singapore FinTech Festival and asked whether Distributed Ledger Technology (DLT) has, in the intervening years, established itself as reality or is it still hype? And if it is reality, what are the key use cases and barriers to adoption? Is it better to be an early adopter or a fast follower?

David Rutter expressed his surprise that this is still a valid question, as there are numerous companies, both large and small, working on blockchain solutions with over 150 applications being built in the R3 marketplace. Mark Adams concurred, indicating that there has been a drop in the number of requests to ASIC to discuss potential use cases, while conversely, there are examples of solutions going into production, for example, a solution to replace existing clearing mechanisms by using blockchain solutions.

Jorg Gasser agreed that we have moved past the hype cycle based on the following developments:

- Powerful investors are getting involved in blockchain solutions
- An increased demand for regulators to develop regulatory frameworks for blockchain solutions
- The Swiss stock exchange, SIX, will be launching an end-to-end settlement solution based on DLT

In summary, the hype has settled down, and real and applicable solutions are being developed.

In terms of what is creating the biggest impact, in Rutter’s opinion, there is no single use case that will act as a launchpad for blockchain. There are many use cases from institutional to the unbanked that could benefit from DLT.

Jones’ view is that the current activity is focused on building the infrastructure for DLT to succeed. In parallel, the industry is slowly adapting, for example, through tokenisation of assets.

Gasser opined that regulators will need to take an open, collaborative approach toward DLT to help improve market efficiency, and this approach has since helped open and grow the Swiss market.

A number of countries, for example Singapore, United Kingdom and Australia, have taken leading roles in encouraging and embracing DLT. Adams’ assessment is that DLT provides the mechanisms that could deliver the transparency and openness required by regulators. He believes that Australia has a sound fundamental framework, which, importantly, is technology agnostic to support DLT growth. He did acknowledge that this may require existing regulations to be assessed from a different perspective.

Gasser further stressed that due to the international nature of FinTech, standards rather than regulations are key to enabling growth and adoption.

Jones believes that the current regulatory landscape is well placed and encourages growth, and that the main challenge is with scaling technology and business evolution. Rutter cited a DTCC study that
identified two solutions that are capable of processing 18,000 transactions per second, and that scalability is not necessarily a barrier, but rather a factor to growth.

In addition, the following barriers were identified:

- Focus on technology solutions rather than correctly understanding the underlying problem
- Migration to and integration of the DLT solution
- Identifying all the affected players within the community and bringing them on the journey
- Creating a unified infrastructure
- Ensuring data privacy while encouraging competition

To the question of whether to start now or to wait, all the speakers agreed that a prudent approach is required. Fundamentally, it is important to understand the problem and assess whether if DLT is a feasible solution.

At the end of the discussion, the speakers were asked to predict the key topics which will be discussed in five years’ time.

Rutter envisions a future where use cases which are creating waves.

Gasser believes that only through technologically neutral regulations can technology and solutions be developed to best solve customer issues.

Adams is expecting that the integration of AI and DLT will generate game changing solutions.

Similarly, Jones believes it is inevitable that cyber security, DLT and AI will combine to provide game changing solutions. For example, a true robo-advisor would be capable of voice interaction and able to make decisions unique for each individual.
Pioneering Infrastructure – The Backbone of FinTech
3.00pm

Key discussion points

Mark Beeston noted that FinTech “pioneers” today are getting caught in a “pincer movement” between the new-age FinTech companies and traditional financial institutions. Today, roughly 120 to 150 new FinTechs are emerging every quarter in the B2B space alone, putting pressure on the FinTech “pioneers” to continuously re-invent themselves.

Kim Fournais mentioned that globally, the ecosystem is evolving and that partnerships with other ecosystem stakeholders is critical for survival. Fournais said that his company focuses on identifying areas where they can improve and then look for potential partners who can help them bridge the capability gap. He further mentioned that forging partnerships can help companies better their customer experience.

Alex Kong mentioned the importance of sharing Application Programming Interfaces (APIs) with partners, and that API partnerships can help FinTech “pioneers” better their customer experience.

Richard Koh said that financial services are still very opaque to customers and that there is a need for FinTechs to make financial services transparent. Koh mentioned that partnerships with banks are critical to bring more transparency and better pricing to the end customers.

Shailesh Naik endorsed all the above points and further added that while partnerships are important for FinTech “pioneers” to stay relevant, but it is even more important to see what kind of partnership it is. Forging partnerships where all involved parties have their “skin in the game” is critical.

Beeston then steered the conversation towards the importance of having innovation labs within companies, and asked whether having such labs is a pre-requisite for FinTechs to innovate.

Kong mentioned that his company has opened a 40,000 sq ft innovation lab in Hong Kong, allowing TNG FinTech Group to open around 3,000 APIs to partners. Such labs also serve as a launching pad for new FinTechs (e.g., RegTech, InsurTech) to partner with TNG and help the company serve its customers better.

While Beeston acknowledged the usefulness of having such labs, he mentioned that innovation should become part of the corporate culture. By just having the relevant technologies around does not mean the company will be able to successfully innovate. Therefore, it is important that each employee acts as an innovator.

Naik re-emphasised the above point by saying that companies cannot expect to become innovative simply putting up a big Innovation Centre sign. They will need to empower each employee to think and act as innovators. Therefore, creating an innovation culture is more important than building a big Innovation Centre.
Beeston went on to ask the speakers about the Build versus Buy paradox – do they prefer to build technologies in-house, buy or partner with other companies?

Naik mentioned that the option of Build vs Buy is always on the table for them, and that the decision is made based on "speed to market". If they can build the technology or the solution offering in-house faster and better, they will proceed to build it internally. If not, they will either partner with other companies or buy the technology externally.

Both Koh and Kong mentioned that today, most technologies are offered "as-a-service". Therefore, subscribing to such services is better for them in the interest of time.

Beeston then talked about some of the emerging technologies such as artificial intelligence, big data, cloud computing and blockchain, and asked the speakers how their FinTechs are using some of these technologies.

All the speakers mentioned that they do not necessarily think about the technology first. They are more focused on bettering the customer experience and will decide which technologies will help them serve their customers better.

Beeston finally engaged the speakers on the threat of fraud and cyber security on FinTechs.

All speakers unanimously acknowledged cyber security as their single biggest risk to mitigate. The speakers also mentioned that they handle huge volumes of customer data, and therefore, investing in state-of-the-art cyber security infrastructure is critical for FinTechs.
Capital Markets FinTech – A Global Stocktake
4.00pm

Key discussion points

Scott O’Malia began the session by pointing out that the main objective centres around the status of the capital markets, the technology and solutions that are required to revolutionise the market and most importantly, what needs to be done to address the disruptions. While there has been a very open and positive regulatory environment, O’Malia acknowledged that some of these regulations do not facilitate across borders. This may lead to jurisdictional-based approaches that may scare off many of the technology innovators.

For ISDA, O’Malia mentioned that there has been significant efforts to standardise legal contracts and product definitions to ensure that these can be used in a very standard and consistent manner by market players. The next step taken to innovate was to standardise the representation of the trade’s life cycle, and to identify the economic activity in a very specific and cost-effective way across all product types. By doing so, this will break up the bilateral and stoic nature of the data structure in the current system that freezes a lot of the innovative solutions.

When asked on his views of what are the key drivers in the industry today that are driving new automation and innovation into the market, David Gurle agreed that it is mainly due to cost and inefficiencies concerns. Technology iterates innovation in two different ways. Firstly, technology brings about complexities for companies with multiple number of information systems. This leads to increased friction in the mechanics of how companies work with one another. Secondly, innovation cannot happen if we continue to rely on legacy systems. With more advanced technological tools such as artificial intelligence, cloud computing and distributed ledgers, companies are able to innovate in a different way.

DTCC has been involved in providing solutions in the past and now, developing new technologies for the future in the capital markets industry. Rob Palatnick shared that 50 years ago, the derivatives business was a purely paper-based industry, bringing in the specific example of the trade certificates, which subsequently moved to be stored digitally in vaults. He believes that there is a brand new set of innovation that includes cloud computing and artificial intelligence that is just starting to take effect.

O’Malia noted the importance of a common representation of the same facts and information from multiple players in the market. When asked about his views on the importance of data to the levels of innovation in the capital markets, Sassan Danesh mentioned that there are some basic infrastructures in place to ensure the coherence of such data, but there are a lot more opportunities at the present to strengthen this. He further stressed the importance of data governance in ensuring the quality of data, including the consideration of the data owner and the incentives of these owners to ensure that the data is accurate.

Daniel Gorfine shared his views on the role of the regulators in the transformation process in the capital markets. It is important for regulators to understand the systems that will be empowering the markets. The regulatory reporting space, in particular, is taking note of a potential common infrastructure to be
adopted by market players in future that allows regulators access to more real-time data. More importantly, regulators need to ensure that the rules set are at least technology-neutral or more permissive, to allow more innovation to occur.

Gurle said that trust is essential to allow different data sets to communicate with one another. It is then important for regulators to take on a more active role in incentivising such a network built on trust. Cyber security measures will also need to be adopted, together with regulatory inputs to ensure that the playing field is fair for all. Palatnick noted that collaboration between different stakeholders is key. A standardised data model will be fundamental, and regulatory bodies should create sandboxes where innovative collaboration can happen. Vendors are also essential to the process. They offer common solutions and different software. Danesh also highlighted the importance of regulators in fostering the adoption of innovative solutions given that historically, regulators know who they need to regulate.

O’Malia asked the speakers to share their views on the technology in capital markets. Danesh picked cloud computing with proper cybersecurity measures and Palatnick mentioned the Application programming interface (API)-based world which enables privacy and security. Gorfine views that data analytics and machine learning will be essential in shaping the capital markets industry in future.
Talent and Leadership for the Digital Economy: Employers’ Perspectives

5.00pm

Speakers
- Aharon Aharon, Chief Executive Officer, Israel Innovation Authority
- Nils van Beers, Managing Director, StartupDelta
- Susan Hwee, Managing Director, Head, Group Technology & Operations, UOB
- Fabian Vandenreydt, Executive Chairman, B-Hive

Moderator: Lesly Goh, Chief Technical Officer and Director of Enterprise Architecture & Technology, World Bank Group

Lesley Goh opened the session by highlighting the importance of human capital and finding and retaining talent in today’s disrupted industries. Goh highlighted the World Bank’s recently published Human Capital Index report which focuses on investing in people as well as their education and healthcare to make the global workforce future-ready. Susan Hwee opined that from a Singapore perspective, the key is not to lose Singapore talent in the first place. She believes that the city-state must remain attractive and continue to be magnet for talent. In today’s age of technology revolution and disruption, the war for talent is real. The challenge is how to create a value proposition for talent that is sustainable and extends beyond a favourable tax regime and a good salary.

Goh asked Aharon Aharon to highlight his experience of moving from private to public sector, and the challenges and opportunities he sees for developing talent and leadership. Aharon responded that the main difference he has noticed between public and private sector is around policies and not people. He believes this is due to private sector companies having clear missions whereas in the public sector the mission is vague because anticipated results are longer term. Fabian Vandenreydt added that a recent survey into the impact of digitisation of Belgian financial institutions showed that 40% jobs in banks will be replaced by new functions (not new people), and only a third of that 40% can be reskilled. This means two thirds of this 40% will have to be newly procured workers. All countries are facing similar challenges and this creates war for talent. Collaboration is thus key, be it collaboration between private and public sectors to facilitate reskilling or cross-border collaboration for (re)distribution of skillsets. Nils van Beers volunteered another statistic that one in five Dutch graduates now see entrepreneurship as a viable career alternative, making it easy for startups to find talent. The challenge for big companies now is how to compete with startups that offer preferred lifestyle and prestige benefits. Vandenreydt stressed that the entrepreneurial mindset should be encouraged across all demographics and not be limited to millennials. Older workers have a wealth of knowledge that can be shared so they can be ‘repurposed’ without necessarily having to be reskilled.

Goh cited LinkedIn CEO, Weiner, as fostering a culture that encourages employees to ‘build for a higher purpose’. She then asked the speakers what are their inspirations for building cultures in their respective companies. Aharon concurred that it is important to have a global charter, that is a social responsibility beyond an organisation itself, coupled with the usual benefits such as work-life balance. The rest of the panel agreed that having ‘purpose’ is key but van Beers asserted that ‘purpose-driven’ does not only apply to startups as it implies that older generations have no sense of social responsibility which is patently not the case. Rather than there being an inter-generational disparity in a desire for purpose, the generational difference stems from the approach each generation takes to reach goals - process-driven, power-driven or results-driven. Van Beers qualified by saying that, contrary to popular opinion, millennials are results-driven but they tend to take a view that the process is less relevant so long as the target is reached. Conversely, traditional big corporations are invariably process-driven which does not suit millennials’ way of working. Aharon explained that process-driven is preferred over results-driven by
traditional companies because measuring results remains a challenge – it is easier to measure processes. Also, startups, by definition, do not have legacy so do not have to contend with old ways of working. Any solution must allow for infrastructure to live between corporate and startup structures. Vandenreydt volunteered that many organisations ‘command and control’ and promote managers on the basis of an achievement rather than on the basis of people-management skills. Work objectives need to change in structure, culture and management. An agile way of working can address this but the old guard may not feel comfortable with this new way of working. So there is a need to find a happy medium where older, more experienced workers and millennials can find a common milieu.

Goh moved the discussion to ‘learning from mistakes and fostering a culture of agility and innovation’. Hwee’s viewpoint is that the ability to be agile varies across sectors - the public sector comes under more scrutiny, and banking is heavily regulated therefore trust can be easily broken. For these sectors, rather than not wanting to address mistakes, it is about processes that ensure consistency which, for any services sector, is key. Van Beers countered that innovation must be combined with learning from mistakes – and that, contrary to startups, many companies do not foster a culture where mistakes can be a source of learning and not ignominy. He continued by saying that he agrees processes have their place but, as Aharon had earlier alluded to, the metrics for success need to change. Instead of being judged on whether they followed a process, employees should be measured on customer satisfaction, that is, results or outcome. Vandenreydt’s comment, which concluded the last discussion point, was that every company, regardless of culture and/or objective, tackles innovation differently – there is no right or wrong way. What is currently not done enough, however, is learning from mistakes. He finds that, in general, post mortems are done, a culprit is found but, more often than not, a lesson is not learned and the issue is buried. His view is that it is fine to make mistakes but there should be no tolerance for the same mistake made twice.
Google Cloud Stage

Global FinTech Hackcelerator Demo Day
1.00pm

Key points

Ian Pollari opened the hackcelerator by laying out the FinTech landscape, with over $86 billion invested by investors, venture capitals and angel investors. He also noted that there was an influx of digital banking startups across the globe – supported by policy and regulatory changes that facilitate their entry into the marketplace.

He gave examples such as Ant Financial, which was started 4 years ago and is now one of the largest money markets. He noted that FinTech is more than just individual successful companies, and it has a far greater role to play – that of financial inclusion.

Pollari spoke about how FinTech and financial innovation has brought real benefit to the underbanked and underserved, bringing them the sort of financial products and services that we enjoy day to day.

Another point raised Ian Pollari was trust, and how FinTech has a major role to play. He mentioned that financial services have not yet regained the level of trust it once enjoyed before the financial crisis. He even cited his home market – Australia, rife with misconduct issues - as a market where trust has worsened. If we do not address this growing trust deficit, it will continue to hold back the financial services industry.

Pollari spoke about how in order to obtain growing economies and prosperous societies, we need financial services that are fair, efficient and innovative. He mentioned how Asia is a lens into the future and a global innovation lab for emerging trends and financial services, with Singapore as a leading protagonist.

He brought up the 3 C’s - courage, conviction and connectivity. Courage to aspire to a bold vision of the future, conviction to back it up with the necessary resource and investment and connectivity - expanding beyond the national boundaries to help facilitate responsible innovation that is required to develop economies in the ASEAN region.

Pollari noted that innovation is not easy, it does not just take insight and vision, it also requires tenacity, endurance and a lot of hard work.

Pollari brings up the question – what’s next? He mentioned how he was intrigued in seeing some of the new FinTech innovations on display, both during the hackcelerator and in the booths. It is interesting to work out which of the propositions have the potential to scale and make a real difference in real economies and to deliver benefits to real people.

300 applications, focusing on four catergories - RegTech & SupTech, InsurTech, Financial Inclusion and General - were received from 30 countries. 35 panel experts evaluated the applications, 20 finalists were selected, and went through a 12- week programme with mentorship and helped them refine their proposition for the ASEAN market.

Demo: Financial Inclusion

Capital Bay – Malaysia
Capital Bay is a secure platform that has access to multi-bank supply chain finance solutions. All of their solutions can be implemented at a click of a mouse.
Using machine learning and incorporating multiple data sources to provide accurate credit intelligence. Their focus is to help responsible corporations optimise their working capital and provide businesses real-time technology to collaborate with a wider network of financial institutions to access financing opportunities.

**Mosabi – USA**
Mosabi targets the underbanked and underserved as they educate their audience to build better and more stable livelihoods by delivering content through an Android app that has been rigorously designed for low-bandwidth and low-literacy settings.

As people complete their video and interactive media courses they are connected with incentives and calls to action linked to the SDGs.

The app is mostly for no file or thin file clients, built in a narrative style with local languages. Mosabi then sells data insights to banks, providing them leads.

**ToneTag – India**
ToneTag uses its revolutionary data over sound (DoS) technology to communicate between devices - enabling contactless proximity payments, marketing solutions, and on-the-go mobility solutions.

ToneTag has implemented a proprietary security protocol with 3 layers of encryption, using Blockchain and Tokenisation to ensure sensitive information is never compromised.

Additionally, ToneTag enhances customer engagement by analysing shopping behaviour to facilitate contactless payments on existing infrastructure. It also enables real-time communication for a personalised experience.

**EasyEquities – South Africa**
EasyEquities caters to the heavily underinvested and provides DIY investing through their platform. Additionally, they also provide managed portfolios.

Assisted by MrPhy, the bot discovers and matches your risk tolerance, keeping you informed every step of the way. It is a gamified experience that rewards loyalty and contribution. Targeted mostly at millennials, it makes investing fun and educational.

**Quotanda – Mexico**
Quotanda aims to make education affordable and accessible to students who have previously been unable to apply to, or unable to stay in school due to a lack of financial resources.

Using alternative and big data, their scholarship and loan origination software allow universities and bank customers to quickly set-up and efficiently manage digital, white-label, mobile-enabled student financing solutions (loans and scholarships).

Quotanda’s software streamlines the student application process and shortens loan and scholarship decision making from 45 days to just a few seconds.

**Corlytics – Ireland**
Corlytics collects regulatory information using automation from regulatory websites, applying natural language processing (NLP) to categorise the data and rate the regulatory risks by running risk models.

Additionally, the company digitises the data into heat maps, and point to where highest risk is.

They provide data across legal, compliance and audit and assist by making sense of regulation.

**Eightwire – New Zealand**
Eightwire allows organisations to seamlessly transform into a single data organisation whilst protecting technology teams from the exposure of owning data movement.
Eightwire can link together the thousands of teams, practitioners, and departments without changing their systems. Additionally, Eightwire can deliver digital analytics and transformation while maintaining high privacy and security requirements.

**Heckyl – India**
Aggregated, analyse, and act. Heckyl analyses structured and unstructured data, gather information across all digital channels and aggregate them on their platform.

Through Natural Language Processing (NLP), Heckyl can provide insights from traditional and alternative data sources such as social media social sentiments, and monitor them closely.

Heckyl keeps clients updated constantly on government moves, hedge funds or PE investments, VC deals, economic announcements and does all the heavy lifting for them – helping clients make sense of millions of raw news data points.

**Instantor – Sweden**
Instantor provides solutions that support everyday people in communicating with the financing ecosystem. Their solutions process transactional data, support financial data aggregation and improve credit risk management - making credit risk decisions faster, easier, and fairer for all.

Instantor provides credit risk management - providing real time data and intelligent insights that take the guesswork out of credit scoring and prevent fraud.

**Spin Analytics Limited – United Kingdom**
Spin Analytics provides RISKROBOT – it implements credit risk Models’ development and maintenance by leveraging predictive analytics, AI and ML techniques on Big Data. It also implements all the sophisticated algorithms and methodologies needed for advanced risk management and regulatory purposes.

RISKROBOT makes it extremely simple for both Financial Institutions and Corporations to significantly upgrade and fully automate their Credit Risk Management processes.

**Demo: InsurTech**

**Boxx Insurance – Canada**
Cyberboxx changes the way SMEs can manage cyber risk and help them meet the new regulatory standards for data security. Cyberboxx members not only receive the dollars and expertise to respond to a cyber-breach, Boxx Insurance helps them avoid being hacked.

Additionally, the company helps clients predict their chance of being hacked, monitor their cyber threat risk and boost their security where vulnerabilities are identified.

**Digital Fineprint – United Kingdom**
Digital Fineprint aims to solve under-insurance in small and medium-sized businesses. They do this via their product DFP Risk Atlas, a software-as-a-service intelligence solution which uses data analytics and AI to deliver actionable insurance insights.

DFP Risk Atlas shows the insurance community (insurers, MGSs, and brokers) which insurance products and solutions to provide and build to protect against risks facing SMEs, and simultaneously improves the reach and profitability of the client’s business in the SME market, enabling the company to help SME business owners understand more about where their risks lie.

**Gefen Technologies – Israel**
Gefen Technologies provide client engagement for InsurTech. Allowing agents to provide customers the personal service they get from face-to-face meetings. Agents can connect with customers at the right time, when relevant and convenient.

Additionally, agents can use a personalised website to drive quality leads, as well as market and sell across all digital channels. Finally, agents can launch automated yet personalised campaigns that free up time and help them focus on growth.
Lucep – Singapore
Lucep allows agents to connect and manage all their leads in a simple call list. Lucep integrates with the client’s current CRM as well as storing prospects securely in the cloud. It allows agents to track where their customers are, average callback times, and the number of requests allocated to the team on a daily basis. Lucep tracks all these important details in a simple and empowering format.

Additionally, Lucep will inform agents when a lead is generated, allowing agents to compete to claim the lead via an uberised model. This helps to motivate agents to respond faster and have better customer conversations.

The Glue – Belgium
The Glue was designed to enable the rapid creation of customer centric capabilities. Event driven service modelling is implemented using an in-memory data and processing grid to build data rich, powerful micro-services. The Glue’s modern architecture significantly reduces the dependency on legacy systems and facilitates higher performance and enhanced scalability capabilities.

The Glue is appropriate for all financial institutions as its comprehensive development framework enables users to very quickly create and customise digital journeys and to dynamically implement changes, as and when required. It seamlessly processes context aware events simultaneously from multiple channels, blending them with real-time input from customer intelligence, risk, compliance or other systems.

Demo: General Financial Services

BTO – Singapore
BTO allows everyone to realise a financial plan, by building a collaborative platform for clients to engage their customers.

The platform is simplified and gamified to collect all sorts of relevant financial data, and allows users to plan for their retirement, buy a house or for their child’s future education.

It allows clients to onboard their customers quickly, and let them immediately play with their own life scenarios and dreams to naturally discover their real appetite for financial products and services.

Billon – Poland
Billon is an interoperable, enterprise grade software platform that seamlessly combines fully regulated money, identity, and documents into a single distributed ledger using their own high-spec blockchain protocol.

Solutions built upon their platform provides a unified view across the entire enterprise, simplifying processes, lowering costs and directly connecting companies with their clients - while empowering data privacy and control.

Eltropy Inc – US
Eltropy Inc aims to use Instant Messaging for customers to engage bank and insurance agencies – due to the fact that Instant Messaging is the number one communication channel in the world.

The company provides a secure and compliant way for clients to engage their customers across messaging apps such as iMessage, Messenger, WhatsApp, WeChat and Line, etc. Eltropy claims that the companies using Eltropy's software see a 300% increase in sales conversions and a 800% increase in client engagement.

Lattice Limited – Hong Kong
Lattice Limited offers the world’s first personalised and customisable Robo-advisor for high net worth investors. It allows the portfolio manager to integrate the views of their customers (such as being bullish about oil markets) into the robo-advisor to tweak their portfolios to their liking.

The portfolio can be re-tweaked and rebalanced again at any time based on the clients’ views, opinions and situations.

Valocity – New Zealand
Valocity is a high intuitive and customisable digital platform that automates the entire mortgage valuation process from end to end.

It does this by providing access to real-time automated valuations and connecting an ecosystem of consumers, valuers, appraisers and brokers together through one centralised, cloud-based platform.